

Australian

JANUARY/FEBRUARY, 1980. ISSUE 100. Vol. 9 No. 7

90c*

MODEL RAILWAY

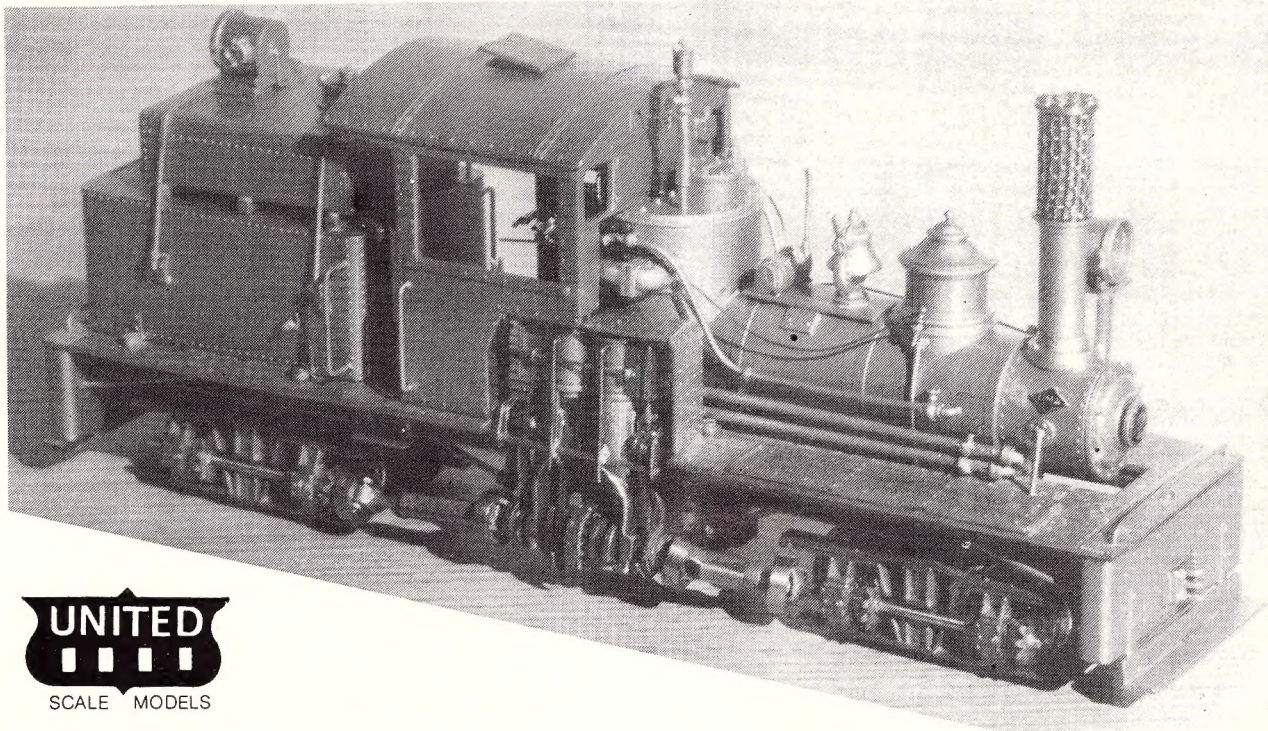
Magazine



Registered for posting as a periodical — Category B.
* Recommended retail price only.

NEW!....

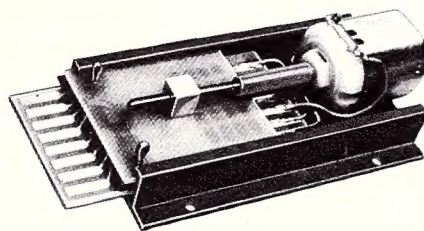
FROM THE SHOPS OF 'UNITED'....



OUR VIEW SHOWS THE PILOT MODEL OF 'UNITED'S' NEW HO MICHIGAN CALIFORNIA LUMBER Co. No. 2 TEE BOILER SHAY LOCOMOTIVE, STOCKS OF WHICH ARE DUE TO ARRIVE DURING DECEMBER 1979. THIS ENTIRELY NEW MODEL COMES FROM THE MAKER OF THE FINEST QUALITY GEARED LOCOMOTIVES FOR HO & HO_{N3} GAUGES. FEATURES INCLUDE FULL BACKHEAD DETAIL, REMOVABLE CAB, AND SPECIAL CORELESS MOTOR, ESPECIALLY DEVELOPED TO FIT THE CONFINES OF THIS LOCOMOTIVE. ESTIMATED PRICE ... \$511.00. ALSO TO COME IN HO_{N3}, AT A LATER DATE.

Other News from the Dockyard...

Our new Model Engineers' Price List @ 95c per copy (postage, 20c extra) lists a wealth of hard-to-find, fine quality nuts, bolts, taps, dies and tools. Additions include the new Emco Unimat 'U3' Lathe @ \$339.25, along with matching Universal 3 Jaw Chuck @ \$52.90 and Assorted Tool Bit Kit @ \$42.55. Also included is our new 2-speed 12V Electric Drill. This powerful German hand tool is also available through all our hobby outlets. Chuck capacity is 0.5 to 3 mm dia, the two gear ratios giving speeds of 8000 and 2000 rpm, as required. Also listed are matching Tool Sets, each comprising of a variety of pencil shaped rotating grinders, cutters, circular saw blades etc. Whilst a Drill Stand with Milling Attachment will be added during 1980. Our relatively new range of Japanese No 1 Gauge live steam Locomotives, both ready-to-run and in kit form, are also included in the new Model Engineers' Price List ... New shipments to hand pre-Christmas included consignments from Kadee, Cantral Valley, Cal-Scale, Faller, Athearn, Acme, Peco, Shinohara, Marklin and Hornby ... Recently to hand from Alexander Scale Models are further stocks of their fine HO Structure Kits. Comprising Stiff Leg Derrick @ \$7.75, NYC Pattern Coaling Tower @ \$13.00, Water Tank @ \$9.20, Oil Tank & Rack @ \$7.20, Pillar Type Platform Crane @ \$6.70, Haunted House @ \$14.85, Freight Station @ \$7.95, Flagstop Station @ \$4.95, Country School @ \$4.95 and Interlocking Tower @ \$9.20 ... For those working in HO_{N3}, now to hand are more of the fine Rail Line D & RGW 3000 Series 25 Ton Box Car Kit @ \$11.45 ea ... 1980 promises some interesting developments for traction fans working in HO gauge. New models will include the SP MU 'Red' Electric Cars which later went from the San Francisco Bay area, to Pacific Electric. These will comprise: 300 Series Coach, both powered and non-powered; 438 Series Trailer, 600 Series powered Combine and 700 Series powered Baggage Car. Meantime, due in early New Year are the Illinois Traction System 273-283 Series Combine, for which the matching Parlor-Observation trailer Car will follow later ... By the time this issue goes to press, from Tenshodo, we expect to receive the GN 4-8-4 'S-1' Locomotive in Glacier Park livery, along with more MH-7 Motors and other popular accessory lines ... Dremel Moto-Tool with Tool Kit are now available @ \$82.50 ... Shinohara are soon to introduce a



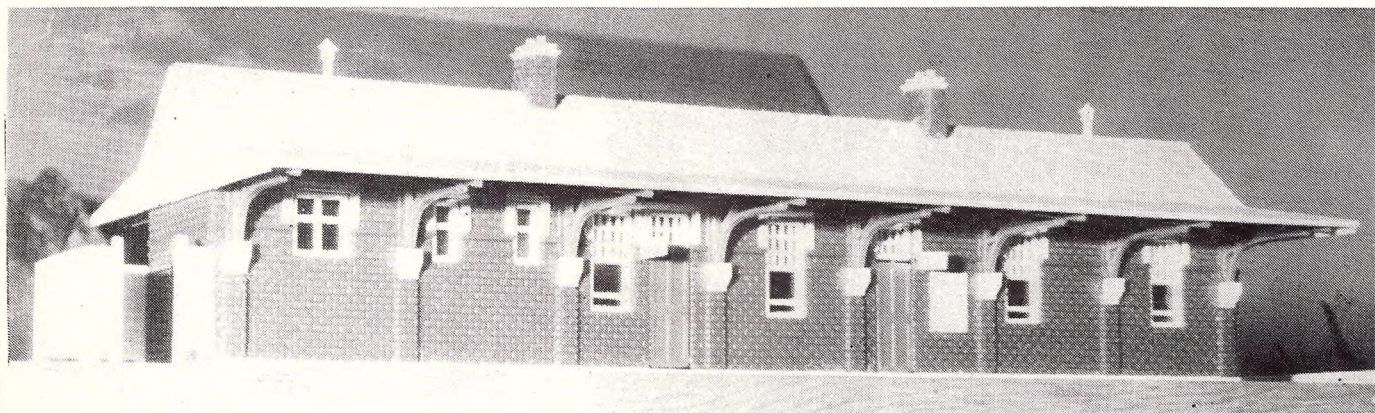
point motor designed specifically for their Code 70 N Gauge Turnouts. Meantime, stocks of the long awaited Mann Made motor drive Point Motors, illustrated herewith, are now available from all our outlets for Shinohara Track. Recommended price, \$10.95 each ... Fans of the Southern Pacific will welcome Alco Models' HO SP 'MK-6' Series 2-8-2 with massive Vanderbilt Tender. Stocks of which are due about the time this issue hits the book stands ... During January, Alco Models' will deliver the Long Nose version of the EMD SD40-2 Diesel. The High Hood and Short Nose versions of which will come later. Other production expected in the first half of 1980 will include the HO EMD 'E-2' A & B Diesel Units (both powered), the HO Baldwin RT-624 Diesel Transfer Unit and Nickel Plate Products HO Milwaukee Road 'ES-2' Steeple Cab Electric Locomotive. The latter to come painted ... Amongst replenishments expected in January are more Rail Cutters, Shinohara Diaphragms and X2F Couplers, Gear Pullers, Driver Quartering Tool and a very limited number of 1/4" scale Pantographs ... New developments in our line of No 1 Gauge Live Steam Locomotives continue. The Southern Railway 'Schools' Class 4-4-0 Locomotive has now sold out and the factory is working on a replacement British model. The SR 'King Arthur' 4-6-0 Locomotive. First stocks are scheduled to come toward the middle of 1980. Estimated prices are: Kit, \$989.00. Ready-to-Run, \$1,297.00 ... Dockyard have long carried almost the complete range of 'Faller'. The world's largest line of plastic structure kits for HO and N gaugers. Further large stocks recently arrived, including the 1979/80 Catalogue. Copies of which are available @ \$1.35, or \$2.15 posted.

Continued on page 56

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A few samples of discount prices on Locos in stock.

Westside Class A 20 ton Shay \$309
Key 2-8-0 Colorado & Southern narrow gauge \$215
Sunset Santa Fe 3192 2-8-2 \$199
Sunset GN Q2 2-10-2 \$219
PFM Michigan II 2-truck shay \$425
PFM N & W A Class 2-6-6-4 \$860

Coming Soon

Early version UP Challenger, super discount price expected to be \$470.

Super detailed version of UP 4-12-2 — will be expensive but very nice, write for information.

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Modern Industry	\$6.95
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Brown Bungalow	\$8.50
Dr Whyte's House	\$9.65
Red Lake Mine	\$6.35
Buckhorn Mine	\$15.45
Black Bart Mine	\$5.30
2 Stall Engine House	\$11.20
3 Stall Roundhouse	\$16.85
3 Extra Stalls for Roundhouse	\$13.55
Bekins Warehouse	\$16.60

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Toulomne Train Repair Shed	\$35.20
Marly Grist & Saw Mill	\$19.45
D&RGW Coaling Bin	\$15.45
Cudahay Meat Packers	\$19.45
Los Pasos City Water Tower	\$18.25

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Branchline Water Tank	\$13.95
Sand House	\$15.45
Farm Water Tank	\$18.25

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Victoria Falls Bank	\$21.10
Fountain Brewery	\$42.20

BOWSER

Casey Jones 4-6-0	\$73.10
Old Lady 2-8-0	\$73.10
Pennsy 4-6-2	\$79.55

RIVAROSSA

Santa Fe 4-6-2	\$99.95
NYC J3 4-6-4	\$99.95

WRENN

City of Glasgow 4-6-2	\$60.00
BR 8F 2-8-0	\$64.00

REVELL HO

Superior Bakery	\$6.55
Weekly Herald	\$6.95
Barnyard	\$5.95
Station	\$6.55

ATLAS HO

Station	\$5.65
Water Tower	\$4.25
Signal Tower	\$4.25
Trackside Shanty	\$2.20
Warren Truss Bridge	\$2.90
Plate Girder Bridge	\$2.90

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Coming items include more of the popular Athearn Truck Trailer combinations especially the wanted Safeway set. Athearn and Ulrich truck wheels sets to upgrade your Yatming Kenworth prime movers. The Athearn Trainmaster is coming. Further stocks of the Railcraft flexible track and loose rail will be available when this magazine goes to press. Remember our prices for this popular range are much lower than those asked by other local suppliers.

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4-8-2s and 4-8-4s around San Francisco.

SP2 Small Engines. \$27.50
Includes switchers, 2-6-0s and 4-6-0s.

SP3 Pacifics to Mountains. \$26.25
4-6-2, 2-8-0, 2-8-2, 4-8-2 & 2-10-2 types.

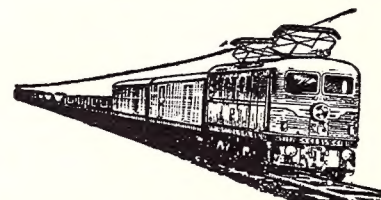
SP4 The Big Ones. \$31.50
Articulateds, 4-8-4s and 4-10-2s.

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HO/OO

3760 Ornately styled 'Old World' Town Hall
 180 x 120 x 285mm **\$29⁹⁵**

3739 Large Gothic Church
 300 x 135 x 400mm **\$35⁰⁰**

3738 Base for Church
 420 x 200 x 10mm **\$6⁷⁵**

No. 3738 (HO/OO)
 No. 7759 (N)

No. 3760

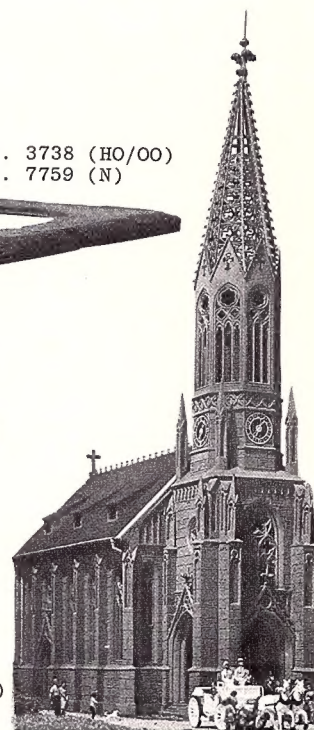
&
N Gauge

7760 Large Gothic Church
 200 x 100 x 260mm **\$29⁹⁵**

7759 Base for Church
 260 x 130 x 10mm **\$5⁹⁵**

VOLLMER

No. 3760 (HO/OO)
 No. 7760 (N)



Working Signals



Signals

WORKING SIGNALS

- 460 Home Signal \$6.50
- 461 Distant Signal \$6.50
- 462 Home & Distant Signal \$8.50
 (includes two operating levers)
- S450 Operating Levers with positive
 lock. Two in packet \$3.25

COACH KITS - L.M.S. (ex L.N.W.R.) 50' CORRIDOR, ARC ROOF

- 5730 All Third, 6 compartment,
 Lavatory, Luggage \$15.95
- 5732 Composite \$15.95
- 5733 Brake Composite \$15.95
- 5734 Brake third \$15.95

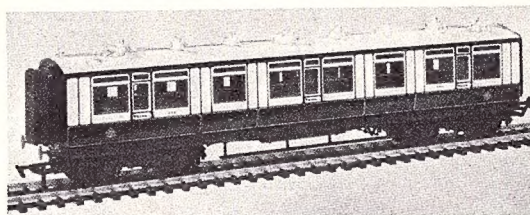
L.M.S. COACHES

Coaches are complete with turned brass buffers, corridor connections and tension lock couplers. Bogies are mounted with self tapping screws included in kit.

Fencing

NEW!

- F/423 G.W.R. Lineside Fencing . . \$1.50
 (Post & Wire - see below signal
 in picture at left)



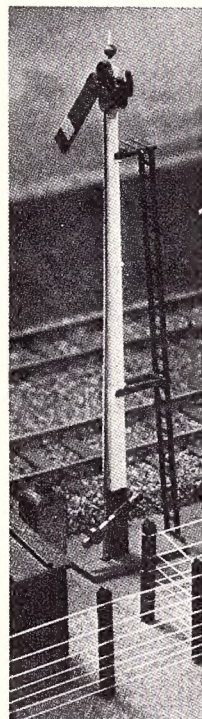
These new signals come painted and partly assembled with special spring-return mechanism. Just drill two 1/2in. dia. holes through the baseboard, one for the post and one for the lever. Fit small screw eyes (not supplied) about every twelve inches. Attach cord to signal and lever via screw eyes, and that's it - what could be simpler?

The prototype signals were introduced by the GWR from 1892 and could still be found in use during the 1960s.

4mm scale - OO/HO/EM gauge.

The pack contains the following:-

- Pre-coloured post with finial and lamp(s) painted.
- Correctly printed arm with separately fitted spectacle lenses.
- Assembled, spring-loaded mechanism and operating wire.
- Moulding, containing ladder, platforms, balance weights, ladder stays and sufficient parts to construct one ground signal.
- Assembled operating lever.
- Length of cord with adjuster.
- Installation instruction leaflet.



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From **KAPLER MILL AND LUMBER CO.**
Pack of 2 Wood Ladders 26 HO scale feet long \$1.40

Siding-Bevel Spacing to represent weather-board with 9 HO inch wide boards. Pack of 2 boards each 90 by 300 mm. \$3.15

Additional **KAPLER** items will arrive soon.

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Cross-lock Tweezers-nickel plated, self-closing points. ea. \$2.30

12" HO-O Scale Rule—Stainless Steel \$4.20

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Hobby and Craft Guide to Air-brushing. Hints for better spraying. \$5.50

Model 2501 Basic Spray Gun Kit. Includes 250 paint spray air brush with 6' hose, 3/4 oz. jar, extra jar with cover, instruction booklet. \$14.50

Model 2503 Basic Spray Gun Kit. As above but with Propel can. \$18.50

Model 250 Air-brushes are single action external mix, finger button controls air pressure — turning the paint tip adjusts spray from 3/4" to 2" pattern.

Model 200EX. Includes model 200 extra fine line air-brush, 3/4 oz jar with cover, 6' hose, regulator, wrench, protective cap, instruction booklet and case. A single action external mix air-brush. Finger button controls air pressure — needle valve screw adjusts patterns of spray from lines less than 1/16" up to 1 1/2".

Price \$50.95

Model 150IL Poster Air-Brush Kit. A double action brush — finger controls the amount of paint and air pressure with the same button.

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1108	Section Tools — 6 in set	\$1.70
1119	Hand Truck	\$0.70
1120	Lawn Mower	\$0.70
1121	Saw Horses (2)	\$0.70
1122	Step Ladder	\$0.75
1123	Hammer and Saw	\$0.55
1131	1914 Ford Roadster	\$4.70
1133	1914 Ford Truck	\$4.70
1200	Engineer	\$1.85
1201	Fireman	\$1.85
1202	Red Cap with Luggage	\$2.10
1204	Station Master	\$1.85
1205	Freight Brakeman hangs on Ladder	\$1.85
1206	Freight Conductor	\$1.85
1207	Freight Brakeman for Car Top	\$1.85
1208	Dining Car Waiter	\$1.85
1209	Pullman Porter	\$1.85
1210	Lady-in-the-Lake	\$1.70
1211	Hobo — seated with stick, fire	\$2.05
1212	Hobo — reclining	\$1.85
1213	Hobo — walking	\$1.85
1215	Loafer	\$1.85
1219	Mrs Spumoni and wash (set)	\$6.10
1223	Woman Walking	\$1.85
1224	Man Seated	\$1.85
1225	Section Hand with Shovel	\$2.10
1226	Section Hand with Wheelbarrow	\$2.60
1227	Section Hand with pick	\$2.10
1228	Old Man Walking	\$1.85
1229	Young Man Walking	\$1.85
1230	Sweater Girl — redhead	\$1.85
1231	Flexible Freddy — painted	\$1.85
1232	Flexible Freddy — unpainted	\$1.85
1233	The Thinker	\$1.85
1240	Lady 1890's	\$1.85
1241	Telegrapher 1890's	\$1.85
1242	Blacksmith with anvil, hammer	\$2.25
1244	Engineer waving	\$1.85
1246	Drunk	\$1.85
1247	Mailman	\$1.85
1249	Telephone Lineman	\$1.85
1250	Section Hand with chain	\$2.10
1251	Passenger Brakeman	\$2.10
1252	Passenger Conductor	\$2.10
1253	Lady's Clothes	\$0.80
1254	Hobo seated with stick, bundle	\$2.10
1255	Old Man Asleep in the Chair	\$2.75
1256	Section Hand with pick, shovel	\$1.95
1257	Sweater Girl, blonde	\$1.85
1258	Blacksmith	\$1.85
1259	Street Sweeper with Cart	\$2.85
1260	Scarecrow	\$1.90
1264	Franciscan Padre	\$2.10
1266	Boy with Tyre	\$2.05
1267	Girl with Tyre	\$2.05
1268	Water Pump (2)	\$1.15
1400	Dog, Scratching	\$0.70
1401	Pigeons (6)	\$1.70
1402	Collie Dog	\$0.70
1403	Dog Sleeping	\$0.70
1405	Hereford Cattle (12)	\$6.10
1600	Rowboat with oars, plastic	\$1.00
1604	Windmill, plastic	\$1.40

CAMPBELLS PARTS HO

250	12 Wooden Barrels, unpainted	\$1.50
251	12 Oil Drums, unpainted	\$1.50
253	12 Oil Drums, black	\$1.75
255	6 Brass Light Shades	\$1.35
256	Chain, 12", 36 Link	\$1.75
927	3 Cyclone Vents	\$1.10
930	4 Park Benches	\$1.10

We also have the range of 19 different Campbells windows and doors at \$1.00 a pack and Corrugated Aluminium at \$2.10 a pack. Write for Photocopy of illustrations of the Campbell/Weston range.

DETAIL ASSOCIATES parts are illustrated on pages 330, 331 of the 1980 HO WALTHERS Catalogue. We will supply photocopies of the range on request.

DETAIL ASSOCIATES HO

Detailing parts for Diesels and Freight cars. New items are released monthly, the following are in stock as this ad. is prepared.

1003	Dual Headlight, Pyle or EMD. Late type with Jewels	(2) \$1.20
1004	Dual Headlight, Pyle Early type with Jewels	(2) \$1.20
1008	Oscillating Dual Headlight, Mars with Jewels	(2) \$1.20
1011	Dual Headlight, Pyle EMD SW Series type, with Jewels	(2) \$2.10
1101	Lift Ring, EMD 3.5" Eye Bolt	(36) \$1.35
1102	Lift ring, EMD, F&E Unit-nose	(6) \$1.35
1103	Lift ring, Flat — mounts on pilot beam	(8) \$1.15
1104	Lift ring tabs, Roof and Side hood mount	(16) \$1.15
1201	Bell, EMD Cab mount	(2) \$1.15
1301	Cab Sunshade	(6) \$1.40
1302	Cab Sunshade, F&E Units	(8) \$1.40
1401	Drop step, EMD Early GP, SD, SW Type	(2) \$1.40
1403	Drop step, GE, U Series type	(2) \$1.40
1404	Drop step, EMD Dash 2 series type	(2) \$1.40
1501	MU Stand, EMD and Early GP Type	(2) \$1.20
1502	MU Stand, EMD and early GP type — high	(2) \$1.20
1503	MU Stand, EMD intermediate GP, SD single	(2) \$1.20
1504	MU Stand, EMD intermediate GP, SD Double	(2) \$1.15
1505	MU Stand, EMD Late GP, SD type — single	(2) \$1.15
1506	MU Stand, EMD Late GP, SD type — double	(2) \$1.15
1507	MU Receptacles 3 types and 2 blank covers	(8) \$1.15
1508	MU Air hoses	(16) \$2.10
1601	Air horn 3 chime, Nathan	(2) \$1.75
1602	Air horn 5 chime, Nathan	(2) \$1.75
1603	Air horn, Nathan P3/P5	(2) \$2.10
1801	Radio Antenna, can type for AT&SF, UP and others	(6) \$1.20
1802	Radio Antenna, whip type for SP and others	(6) \$1.20
1804	Radio Antenna, wagon wheel type. Photoetched brass with plastic castings	(3) \$3.50
2201	Grab irons, scale size — includes plastic nut castings	(18) \$2.25
2202	Grab irons — formed wire	(48) \$3.15
2205	Coupler lift bar — diesel locomotive type — formed wire	(10) \$2.80
2206	Eye bolt — formed wire	(36) \$3.50
2207	SD Ladder kit — brass and plastic	(4) \$3.55
2301	All weather window, double type for GP, SD Diesels	(2) \$2.10
2303	Cab Armrest 24" and 36" stepped type	(4) \$1.20
2401	Exhaust stack EMD F3/F7/F9 type	(2) \$1.20
2601	Number board stencils — photoetched brass (2 sets)	\$2.80
2701	Air Intake grille "Farr" F&E Units Photoetched Stainless Steel	(2) \$4.20
2702	Alco 64" Cooling fan grille photoetched Brass	(2) \$3.15
2703	Alco 57" Cooling fan grille photoetched Brass	(2) \$3.15
2801	Brake Cylinders for Diesel Trucks	(8) \$2.45
6205	Freight car running board corner grab — 12 formed wire grabs, 12 formed wire eye bolts, 12 plastic NBW	\$2.80
6206	Freight Car air hose	(12) \$1.40
6207	Freight Car long ladder	(10) \$1.40

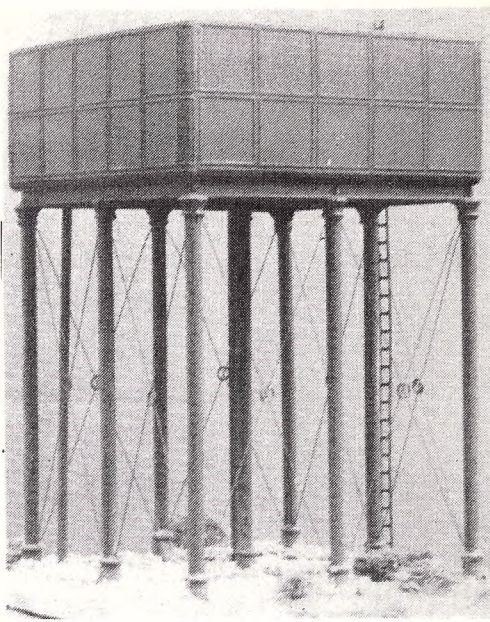
New from Detail Associates! N SCALE Detailing Parts

8201	Cab sunshade	(2) \$1.20
8204	Airhorn — 3 chime	(2) \$1.40
8205	MU Stand	(2) \$1.20
8206	Drop step	(2) \$1.20
8210	Snow plow — high — early type	(1) \$1.20
8211	Snow plow — low — late type	(1) \$1.20
8212	Snow plow — E&F Units	(1) \$1.20

Watch for further N Scale detailing parts during the coming year.

NEW ON THE AUSTRALIAN SCENE

Illustrated are 3 of the latest releases of Australian prototype products available from McBEES. To the right is the SARMOD SAR style water tank. Moulded in epoxy type material the kit is available for \$12.50. Below (left) we have the 'W' series VR Passenger bogies at \$3.95 a pair (without wheels) or \$6.35 a pair with Kadee 36" Disc wheels. Below (right) we have the 'Y' Class VR Diesel sideframes. So that the Athearn SW1500 power trucks can be used the wheel centres are approx. 6" too far apart. These bogie sideframes, both 'Y' Diesel and 'W' pass. can be utilised for a VR DERM. 'Y' Sideframes — set of 4 \$3.95.



OTHER AUSTRALIAN PROTOTYPE PRODUCTS

We have received the first shipment of a small re-run of the SAR Goods Shed which we offered in late '78. This will be the last opportunity to obtain this excellent kit for quite some time. Price is still \$11.95.

Our other new bogie release this month is the plate frame type bogie seen under most "Puffing Billy" rolling stock. In HO N2½ (naturally) with your choice of Kadee or Peco wheels.

HO N2½ bogies without wheels (pair) \$1.95
HO N2½ bogies with Kadee wheels (pair) \$3.40
HO N2½ bogies with Peco wheels (pair) \$2.95
VR 6 wheel 'E' series bogie kit (pair) \$3.95
VR 4 wheel 'PL' series bogie kit (pair) \$3.95
VR 4 wheel 'QR' series bogie kit (pair) \$3.95
VR 4 wheel 'W' series bogie kit (pair) \$3.95
(Unless otherwise stated all bogie kits are without wheels).

VR Axle boxes for 4 wheel wagon — suit GY. 4 axle boxes \$1.20
VR Axle boxes for 4 wheel wagon — suit I, IA etc. 4 axle boxes \$1.20
VR Axle boxes "Long spring" — suit 'Z' vans some 'T' vans. 4 axle boxes \$1.20
VR Sideframes only for A, C, D, K and N locomotive tenders (set of 4) \$2.40
VR Sideframes for 'T' Class diesels — designed to replace those on Athearn's SW1500 or S12 mechanisms. Set of 4 \$3.95

From TEN WHEEL DRIVE

Australian Advertising signs.
TWD 100 HO 3 signs — Dodge trucks, Stegbar windows, Coca-Cola — per sheet \$1.95
TWD 101 HO 3 signs — Chrysler Sigma, C.U.B., Victoria Bitter — per sheet \$1.95
TWD 103 HO 45 station poster signs from the 1930-1950 era — per sheet \$1.95
TWD 200 N all six signs from set 100 and 101 — per sheet \$1.95
All TWD signs are photographic reproductions — not printing.

DO McBEES STOCK ANY TRAINS?

A quick glance at this ad. could lead to the conclusion that we do not!
We would like to point out that we can supply:— Athearn, Roundhouse, Train Miniature, Atlas, Bachmann (when it is available), Roco, Fleischmann, Minitrix, Mantua, Model Power, ConCor just to drop a few names. Despite its absence from this ad. we still have a full range (with one or two exceptions) of KADEE.

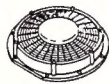
DETAILS WEST HO SUPER DETAIL PARTS



Cooling Fan; 36" Cap-Top Type
For Radiator and/or Dynamic Brake
Use on F-7's, F-9's, GP-7's, GP-9's, GP-20's, GP-30's, GP-35's, SD-7's, SD-9's, SD-18's, SD-24's, SD-35's, E-8's, E-9's

142

pkg(4)



Cooling Fan; 48" Pan-Top Type
For Radiator and/or Dynamic Brake
Use on Late GP-9's, GP-18's, GP-20's, GP-30's, GP-35's, Late SD-9's, SD-18's, SD-24's

144

pkg(3)

106 Rotary Beacon — Roof mount (2) \$1.40
110 Snow Plow with Footboards: 1st and units of SP, WP, UP (1) \$1.75
118 Steam Generator set. 1st Generation Hood units 3 pieces (1) \$2.10
123 Spark arrestors. "Super" lifting type. Non-turbo-charged units (2) \$2.10
140 Snow plow for 2nd Generation hood units for SP, WP, UP (1) \$1.75
142 Cooling fan 36" Cap-top type. For Radiator and/or dynamic brake. Used on most F.GP. SD's, E8, E9 (4) \$1.75
144 Cooling fan. 48" Pan-top type. For radiator and/or dynamic brake. Used on late GP and SD's (3) \$1.75
155 Snow plow. Common type fitted to hood units of numerous roads (1) \$2.10
167 Fuel Filler. EMD Switcher type (4) \$1.40
Except for the styrene cooling fans DETAILS WEST parts are white metal.

UTAH PACIFIC HO

Lost Wax Brass castings.
60 5 chime Diesel horn — GE U-boats (1) \$1.40
61 Speed recording drive — GE type (2) \$1.10
63 Caboose marker with jewels (2) \$2.80
64 Caboose marker lights with 1.5 volt micro bulbs plus green, red and amber marker lenses (2) \$9.75
65 Axle wheel slip detector (5) \$2.10
69 Exhaust stack GE type (1) \$1.40
71 Pyle single Gyalite w/bracket (1) \$1.40
72 Roof vents — cabooses, pass. cars \$1.75
73 Caboose stack 27" high (1) \$1.35
83 Snow shield, UP and Amtrack diesels (2) \$4.20
86 Cast grab irons with NBW detail (12) \$2.75

EVERGREEN SCALE MODELS

For those modelers who prefer working with styrene we now offer the range of Evergreen Styrene Building Materials.

V-GROOVE SCRIBED SIDING

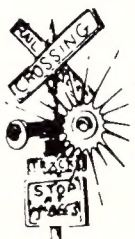
6¼" x 10½" Opaque White sheets.

Part No.	Thickness	Spacing	Qty	Price
2025	.020"	.025"	1	\$2.45
2030	.020"	.030"	1	\$2.45
2040	.020"	.040"	1	\$2.45
2050	.020"	.050"	1	\$2.45
2060	.020"	.060"	1	\$2.45
2080	.020"	.080"	1	\$2.45
2100	.020"	.100"	1	\$2.45
4125	.040"	.125"	1	\$2.95
4188	.040"	.187"	1	\$2.95

HO SCALE STRIPS

Dimensions are in HO Scale Inches. Strips are 13¼" long, opaque white and packed in resealable polyethylene bags.

Part No.	Size	Qty	Price
8103	1×3	9	\$1.55
8104	1×4	12	\$1.55
8106	1×6	12	\$1.55
8108	1×8	12	\$1.55
8110	1×10	12	\$1.55
8112	1×12	12	\$1.55
8203	2×3	9	\$1.55
8204	2×4	12	\$1.55
8206	2×6	12	\$1.55
8208	2×8	12	\$1.55
8210	2×10	12	\$1.55
8212	2×12	12	\$1.55
8404	4×4	10	\$1.55
8406	4×6	10	\$1.55
8408	4×8	10	\$1.55
8410	4×10	10	\$1.55
8412	4×12	10	\$1.55
8606	6×6	9	\$1.55
8608	6×8	9	\$1.55
8610	6×10	9	\$1.55
8612	6×12	9	\$1.55



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A.M.R.M.

**JANUARY/FEBRUARY,
1980
Issue 100, Vol 9, No 7
AT ISSN 0045-009X**

The official Journal of SCMR in Australia.
Incorporating the Yardmaster, bulletin of
The Sydney Model Railway Society.

Published bi-monthly by SCR Publications
of PO Box 235, Matraville, NSW 2036 for
the Southern Cross Model Railway
Association. All rights reserved and all
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Printed by Publicity Press Ltd, of 29-31
Meagher St, Chippendale, NSW 2008. All
compilation, editorial and distribution work
is carried out by voluntary labour on a non
profit basis.

DISTRIBUTION: Subscriptions, SCMR
and SMRS members; hobbyships and
Associations by SCR Publications;
newsagencies and bookstalls by Gordon &
Gotch (A'Asia) Ltd.

ADVERTISING: Details available from
SCR Publications, PO Box 235, Matraville,
NSW 2036. Phone (02) 661-4046
(evenings only).

CONTRIBUTIONS in the form of articles,
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SUBSCRIPTIONS: Rate (by mail);
Australia \$7.00 per year (6 issues);
overseas \$9.70 per year. A limit of one
year. All monies payable to SCR
Publications at Matraville, NSW.
Subscription starts with the first issue after
receipt of money.

ADVERTISING DEADLINES: For all copy
is as follows:—

March/April, 1980	20.2.80
May/June, 1980	18.4.80
July/August, 1980	18.6.80
September/October, 1980	15.8.80
November/December, 1980	17.8.80
January/February, 1980	12.8.80

ON THE COVER: The first four colour cover
photograph for AMRM was taken on Brian
Parry's layout which features mountain
scenery and a stormy sky, painted by Jan
Parry, as a backdrop. In the foreground a
Berg's D50 class hauls a string of four wheel
coal hoppers while the AD60, in the
background heads a goods into the tunnel.
Photograph by Graham Ball.

COMMENT

100 Not Out

There is always something of an aura for an achievement of 100 and for this magazine it is also a triumph against apathy and prejudice.

In pre-War II years anyone wishing to model Australian prototype was really a loner. Information was not readily available and the Railway Departments were more interested in you as a passenger or consignor of goods.

The first commercial magazine I can recall was Hobbies Illustrated and that had a model railway section, and I think the first construction article was for a D57; some bronze castings for same were available at Hobbyco.

It would be of interest if any reader knows if there was ever a completed loco built from these articles.

Unfortunately, this magazine ceased operation mainly from lack of support, which was to be the fate of another venture, The Australian Model Railways, in mid-1956. This magazine was taken over by Brian Rawlings, and was solely about model and prototype railways. But the queer thinking amongst a lot of modellers, it should have been on the style of Model Railroader or similar for them to support it. How the heck such a miracle was to happen Lord only knows.

Mixed Goods made an appearance in early 1958, a joint venture of Ted O'Halloran and Gus Durham. This ran for approximately 7 years (May, 1965) but it was pressure of other work which caused its demise.

Green over Red was another commercial venture which endeavoured to fill the need of the modeller, but insufficient circulation caused it eventually to cease.

In May, 1963 the first issue of the Australasian Model Railroad Magazine, as this magazine was originally called, under the editorship of Dr Tim Moss, came on the market. Its style was a big step forward and received many bouquets, but of course the knockers were still around and I think always will be.

I think the biggest obstacle all these magazines have had to contend with is the fact that most people interested in model railways have been reared on UK, USA or Continental commercial equipment and have little interest in their own railway systems. This attitude is possibly responsible for that curious remark when glancing through an issue "wouldn't buy that one. Nothing of interest in it". One wonders what their interests are, when plans, photos, etc., regardless of scale or prototype, fail to interest them.

Maybe there are really two groups, the modellers and the ones that play trains. I heard a remark after the recent exhibition at the Sydney Showground "It appears they are going more for entries of Australian layouts". Well, these days there are far more modellers of Australian prototype appearing than in the past, but is this not a good thing, maybe a sign of maturity in the hobby.

One would not need two guesses as to what prototype would predominate at any overseas exhibition.

This is the atmosphere with which AMRM has had to contend and indeed at one stage nearly succumbed, but was fortunately rescued by a massive effort from a new editorial team lead by Bob Gallagher, and I am sure those regular readers will agree that great credit is due to them for having raised it to the present high standard, especially when it is entirely volunteer labour, which, by now, must total thousands of hours.

I'm sure many will agree with me that Bob and his merry men are to be well congratulated on making a bit of history in producing the 100th issue of a commercial model railway magazine in this country.

This magazine has done a lot for the hobby over the years, not only by the constructional items, plans, photos and useful hints, but also very importantly by bringing before readers, through the advertisers, practically the whole range of equipment available in this country in all its diverse forms and, in this regard, who hasn't found the feature 'Review' of interest, especially for those who have to rely on Mail Order.

But for issue 200 to be reached the zeal of an editorial staff on its own won't do it, but the active support of every modeller worth his salt certainly will. 'Ave a go, Aussie'.

Norman Read

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The Australian MODEL RAILWAY Magazine is published by SCR Publications, PO Box 235, Matraville, NSW 2036. Please address all correspondence to the Editor.

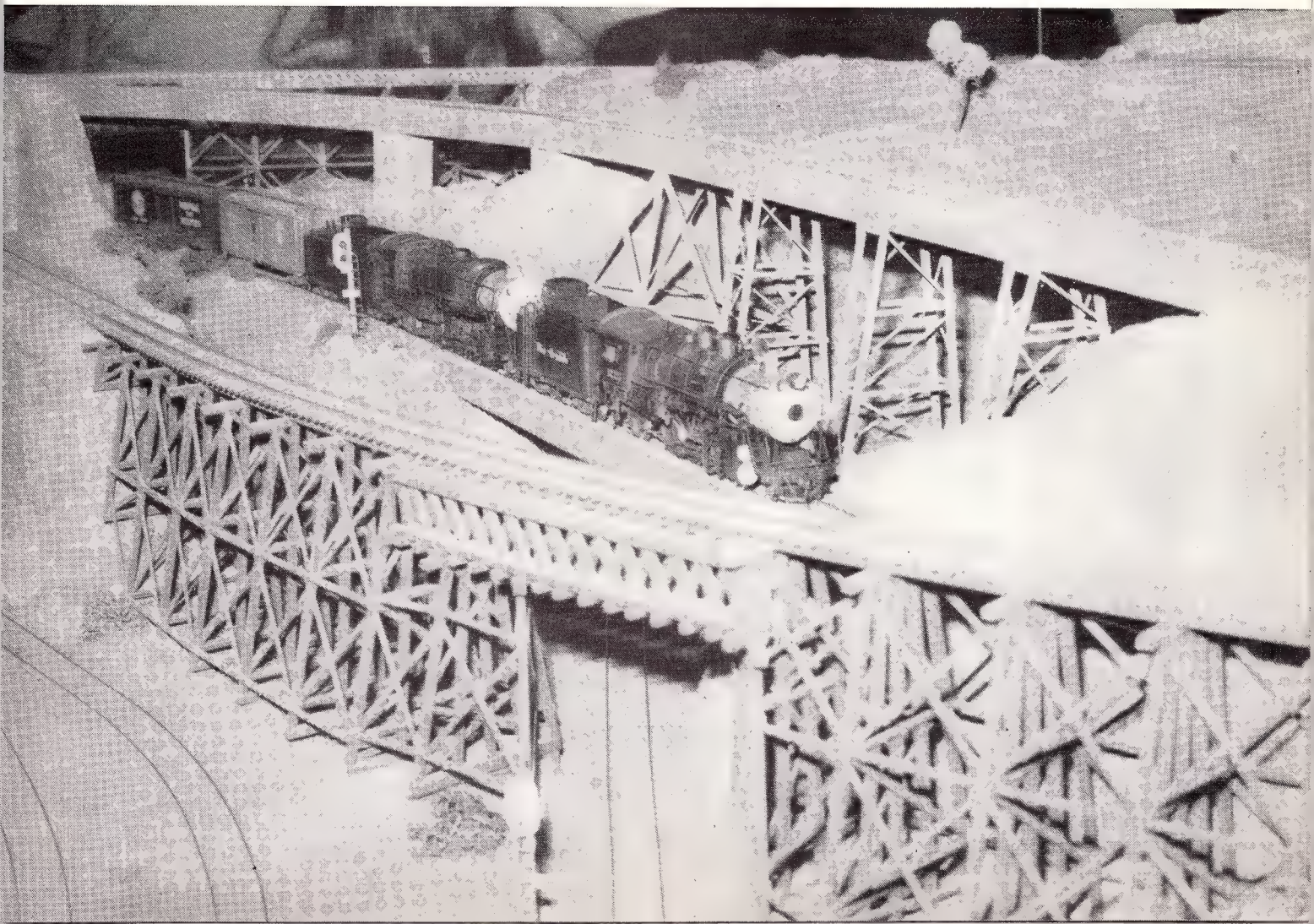
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A.M.R.M.

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Bridges are beautiful, or so they say at Prospect, where double headed Rio Grande locos do what they know best hauling freight on heavy mountain grades. Greg Archer photo.



VERO



Well known European Pastic Model Kits now available in Australia "HO", "TT" & "N" SCALE. All completely painted and many already constructed ready for use. Available at Hobby and Toy Shops.

Catalogues on request at \$2.00 each — Post Free.
Trees and Accessories also available.

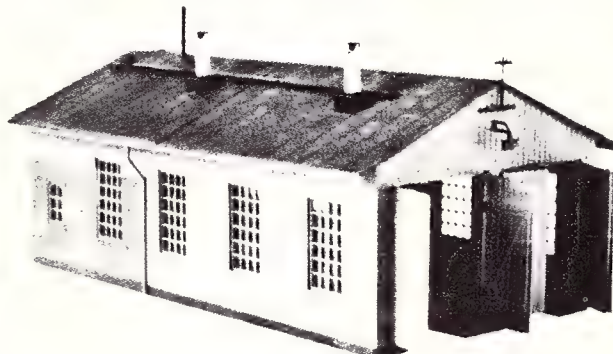
HO

1:87 16.5mm

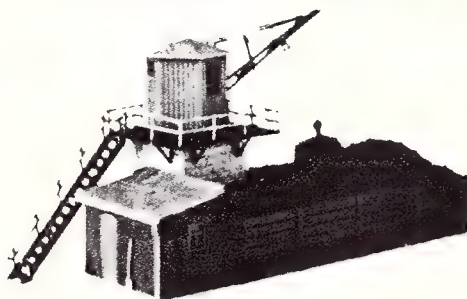


Town-hall B 5457370/129/643

A building set designed according to real subject. The centre of a town, framework printed on, modular construction.
125 x 80 mm



Locomotive shed B 160-3/32 standing 275 x 140 mm



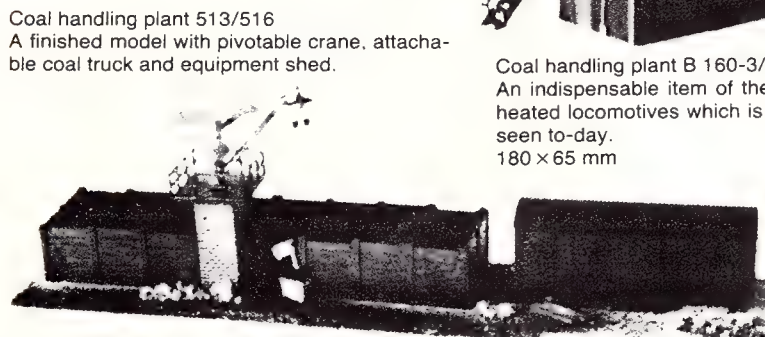
Coal handling plant B 160-3/34

An indispensable item of the period of steam-heated locomotives which is very seldom to be seen to-day.
180 x 65 mm



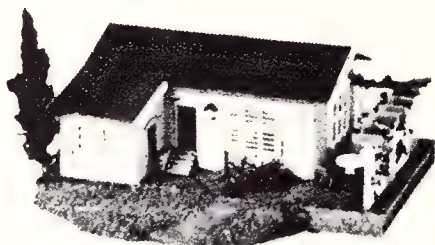
Mountain inn "Pöhlberg" B 160-2/26

An observation inn in Erzgebirge (Ore mountains).
155 x 85 mm



Coal handling plant 513/516

A finished model with pivotable crane, attachable coal truck and equipment shed.

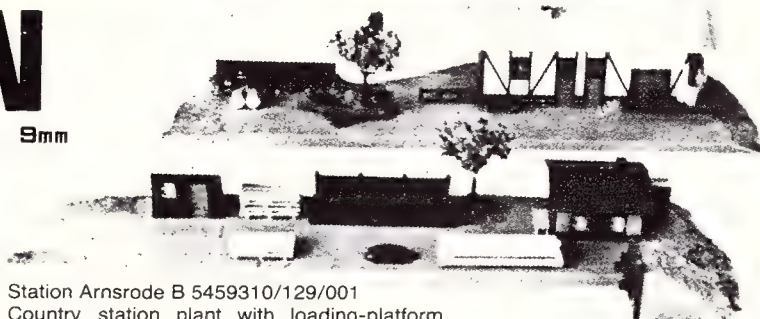


Summerhouse B 5457370/129/632

with terrace and garden modelling
165 x 100 mm

N

1:160 9mm



Station Arnsrode B 5459310/129/001

Country station plant with loading-platform, ample accessories and signalman's house. This building system is very well suited for first equipment.

225 x 145 and 50 x 50 mm

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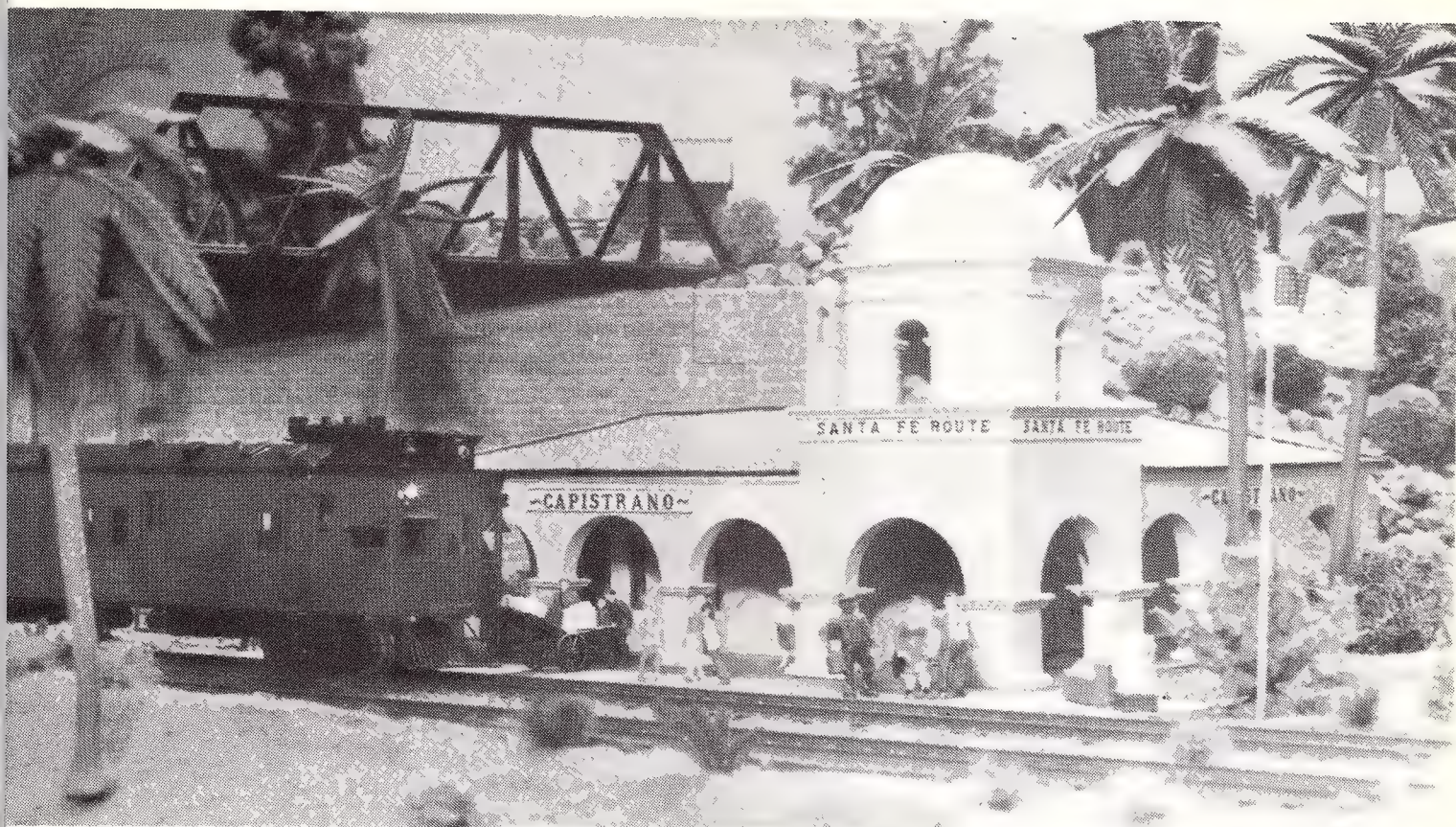
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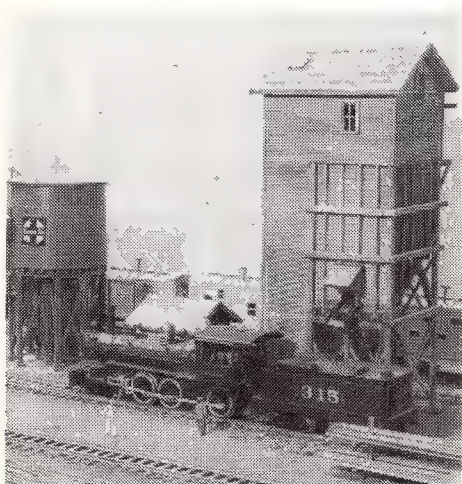
A Hallmark ATSF Brill M-180 Gas Electric coming into Capistrano depot. Weeds by the track were made by drilling a 3/32" hole to a depth of 1/4", putting in a drop of aquadhere, and then inserting a piece of teased darning wool — use various colours including greens, browns and multicolours of these two.

THE SANTA FE DOWN SOUTH — 2

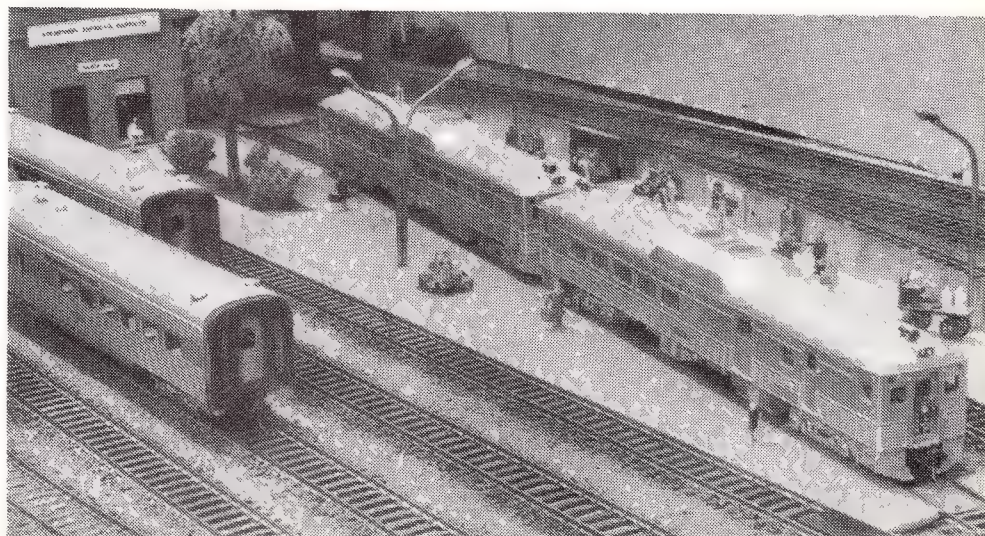
**concluding the pictorial coverage of
Bruce Block's layout.**

Photographs by Graham Ball.

Below Tyco 4-6-0 ATSF 315 class at the Alexander coaling tower, with a work train in the background. The stock of rails was made by soldering old brass rail stock together.



Below Athearn Budd rail diesel cars at the main depot. Extra decals, a Mars headlight and jewels have been added.





Left An Athearn EMD GP-9 in Great Northern colours passes some eager beaver timber cutters employed by the Canyon Lumber Company. The dead trees are twigs from a New Zealand variegated flax plant suitably trimmed. That plant also makes magnificent logs.



Right The wide vision caboose has been heavily weathered — it is unlikely that such dirt would exist on the prototype — the ATSF was much too houseproud.

Below A Tyco 4-6-0 kitbashed to an ATSF 315 Class passes a gang of workers laying some new track extensions. This is often a means of filling up an awkward corner where only something very small will fit and you want to avoid the look of the train turning a corner because it has come to the edge of the layout.



Below A wedding party at the Campbells Scale Models church (this is modelled after an actual church in Santa Ana, California). In the local cemetery a gravedigger watches with interest.



Below A Tenshodo 0-6-0 tank locomotive bought during a tour of duty in Japan in 1952 switches a Kadee logging car at the Canyon Lumber Company. The locomotive has been dressed up considerably with Cal Scale and Kemtron castings.



A black and white photograph of a tall, white, tapered lighthouse-like structure. It features a spiral staircase on the exterior and a lantern room at the top. The structure is set against a dark background.

This construction article has been prepared for those railway modellers who wish to build upper quadrant signals which operate like the prototype in slow motion.

As a starter, it is stated that the writer has built these signals in 7mm scale but, no doubt, they could be built in 3.5mm scale if the builder's eyesight can stand the strain; the signal blade assembly is rather fiddly.

The slow moving upper quadrant signal has an air of elegance not present in lower quadrant signals and its movement can be observed at all points on a lay-out.

The semaphore blade is actuated by an electro-magnet mechanism under the baseboard by means of a nylon thread through the tubular mast, and the characteristic slow motion is achieved by controlling the magnet armature movement by means of an oil dash-pot; the latter is a piston moving vertically in an oil filled cylinder which is open at the top.

Credit for this idea must go to Alan R. Goode, one of the original members of the Victorian Model Railway Society, and who has many of these signals operating on his Hobson's Bay Railway in Melbourne.

No special tools are required but jewellers' saw blades and files are essential in shaping and fitting the blade crank slot in the mast and assembling the blade spindle bearing.

The prototype is the standard upper quadrant signal used in New South Wales and all principal dimensions are based on this prototype in 7mm scale.

Figure 1 is a photo of the completed model and Figures 2 onwards depict the various components and details of construction and assembly.

These Figures are **NOT** shown in 7mm scale but are enlarged for the sake of clarity in printing.

The mast consists of two brass tubes, the upper being about 1/8 inch O.D. and the lower 3/16 inch O.D. See Figure 2.

One end of the lower tube is drilled out for about 3/8 inch to allow the upper tube to be inserted and soldered to obtain the tapered appearance.

The top of the upper tube is also drilled out to open the bore for a distance of 1/2 inch to provide more clearance inside the tube for the blade operating crank.

Before securing the two tubes together, cut the blade crank operating slot in the upper tube — see Figure 3; two (jewellers) saw cuts and filing away the tube wall between the two saw cuts and as deep as one third of the tube diameter. This may be increased later when fitting the blade assembly.

Do NOT make the vertical dimension of the slot more than 5/16 inch shown. If necessary this can be also increased later when fitting the blade assembly to ensure that the slot top and bottom edges act as stops for the blade crank in the Stop and Clear positions of the blade respectively.

The blade is marked out on 1/32 inch thick brass and shaped with jewellers saw and file — see Figure 5. Drill the lense holes and spindle hole before cutting to shape. The lense holes should slightly countersunk at the back.

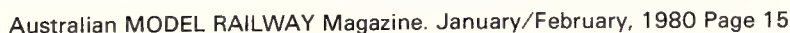
The spindle is a heavy type household pin and the hole should be a tight fit for the pin. Countersink the spindle hole slightly in front to accommodate the pin head.

To ensure the blade falling to Stop position, the spectacle part of the blade should be filed a little thinner than the free end of the blade.

The spindle bearing bracket is formed from 1/32 inch thick brass according to Figure 6. After shaping and drilling the spindle holes, bend around the upper tube and line up the two spindle holes. The spindle holes can be drilled with No. 60 drill or an old gramophone needle.

This is a fiddly job and is cut from 1/32 inch brass — see Figure 7a. Round off the left hand end, which is later soldered to the spindle, but leave the right hand end square as the top and bottom edges must butt on the top and bottom lips of the slot in the upper tube in Stop and Clear positions of the signal blade.

Solder spindle pin head to blade, insert spindle through front bearing hole, put crank on spindle and then spindle through rear



bearing hole.

Check that square end of crank has sufficient clearance between round part of bearing to accommodate upper tube wall.

With blade horizontal, solder crank to spindle in a 45 degree position upwards as per Figure 7b. Use a small pointed solder iron tip and be careful not to get solder on the spindle bearing. See Figure 7c for complete assembly.

Now, with the blade past the Clear position and with crank pointing vertically **downwards**, slip the whole assembly over the upper tube until the crank enters the slot when the bearing can be held against the outside of upper tube.

The blade should now be worked up and down to ensure:-

- the square end of crank does not foul inside of tube — if it does file the crank squarely until it is clear
- the top edge of crank butts on the top lip of slot in the Stop position and
- the bottom edge of crank butts on the bottom lip of slot in the Clear position.

One may get these fiddly bits of work right the first time. If not, then careful filing of the crank and only the bottom lip of the slot, bit by bit, will achieve the right movements.

Brass Wire Links

It is necessary to fit two light brass wire links on to the nylon operating thread. (Nylon is used as it does not stretch like cotton thread).

Make up a 1/4 inch long link of brass wire, insert in crank hole, close link and solder free ends together. Figure 8a and 8b.

Now try the whole assembly on the tube again to ensure all movement is free and blade positions correct.

The brass link is necessary to avoid the nylon thread chafing on the lower lip of crank slot.

Make up the bottom wire link which has an eye top and bottom, see Figure 8c.

Knot a length of nylon thread to bottom of top link and secure with a dab of cement and the other end of thread to top eye of bottom link so that the middle of the latter is level with the bottom end of lower mast tube...

The purpose of bottom link is to prevent the thread chafing on mast tube and the link must be made of light wire so that its weight does not pull the signal blade to the Clear position.

Lightly tin inside of spindle bearing and outside of upper mast tube level with the crank slot.

Painting

Paint the signal blade with flat white paint. When dry apply red to front of blade from the spectacle casting but leave a white stripe vertically, 3mm wide and 4mm from end of blade. When dry, paint a black stripe on the back of blade directly behind the front white stripe. At this stage, do not paint the spectacle.

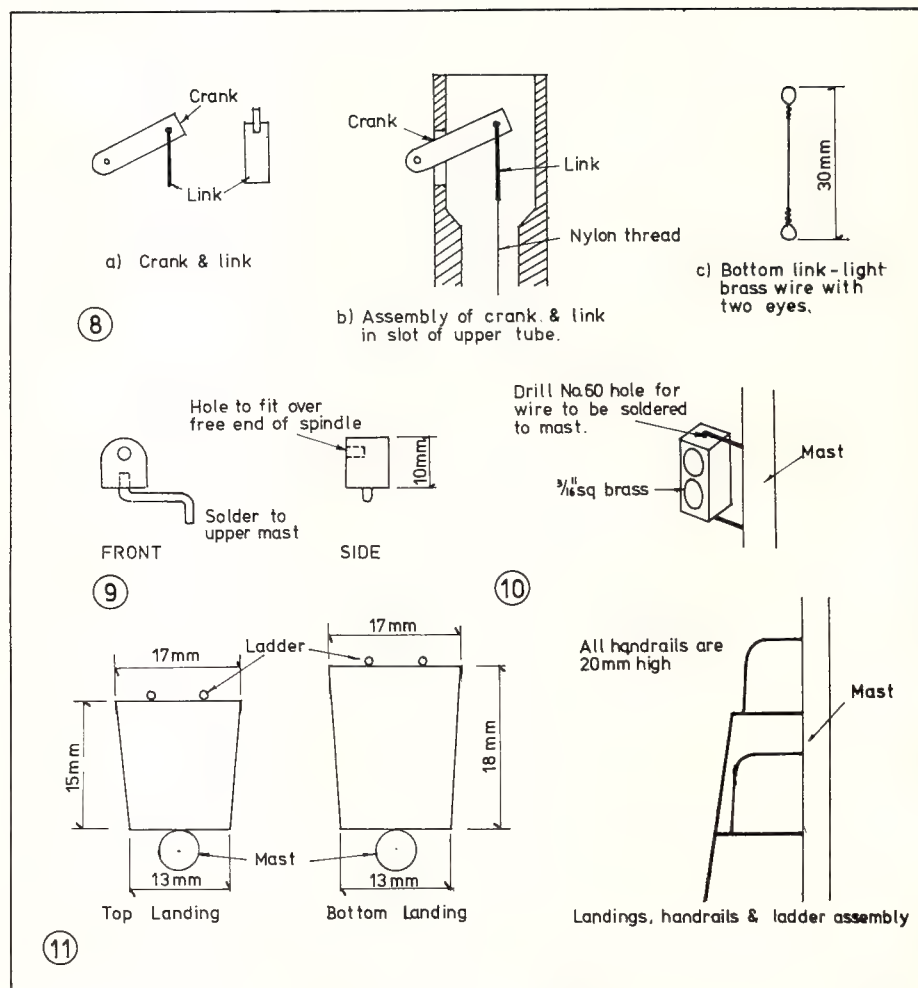
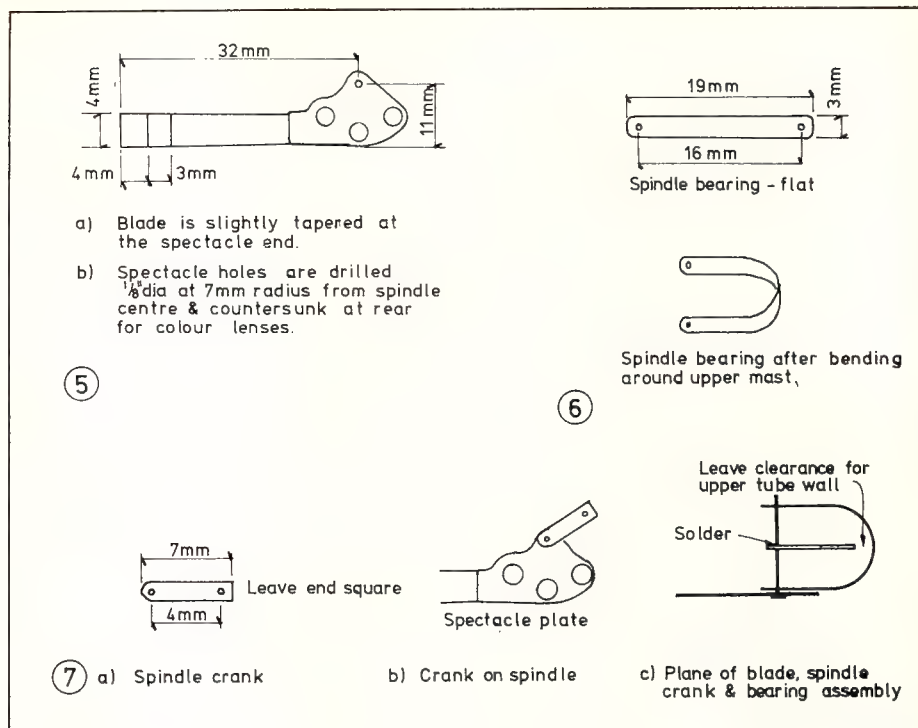
The lenses are made of ten thou. celluloid or perspex punched with a 5/32 inch wad punch.

Now paint the spectacle casting with matt black paint and when tacky put the colour lenses in the countersink of the lens holes at the back. Use a moistened match stick to hold the lenses to place them in position.

Refit the bearing bracket over top of upper tube and with blade in the correct Stop position and middle of bottom link level with bottom of lower mast tube, put a hot iron (no solder) on the bearing bracket and upper tube to melt the tinning and solder them together.

In order to simplify the process of threading the nylon thread and bottom link through the crank slot and down the mast, use a small piece of jewellery chain hooked into the bottom link to give it weight to fall through the mast tubes.

Test blade operation by moving the bottom



link down and up; the blade should return to Stop position by its own weight.

Driving Motor and Lights

Two more items are required to complete the top of mast equipment, viz. a simulated driving motor and a lamp housing.

The motor is shaped and drilled as shown from a piece of 1/4 inch square brass as shown in Figure 9.

The lamp is a small white jewel, in its setting, soldered to a piece of wire which is then soldered to the upper tube behind the red lense with the blade in Stop position.

Possibly one could fashion a lamp with a grain-of-wheat bulb and bring the wires up outside the mast.

On the prototype signal there is a lamp case about 3 feet below the upper light to give the standard two light indication. On the model this lamp is a dummy with simulated lenses soldered to the mast as shown in Figure 10.

This lower light is fixed vertically under the upper light on a Home signal but staggered slightly to the right on an automatic signal.

All signals are provided with mileage location plates on front of mast showing

miles and hundredths of a mile, viz 95-6 as shown in photograph.

Finial, Landings and Ladder

The mast finial can be turned from brass rod, or, one can use a discarded ball pen point and solder to upper tube.

The landings are cut from 1/32 inch brass to the dimensions shown in Figure 11 and the hand rails from 32 gauge piano wire soldered together and then to the mast.

The ladder may be available ready made from hobby shops; if not, then it must be made up piecemeal on a jig and then soldered at the back of each landing and, at the bottom, to the metal base-plate to keep it rigid — see Figure 4.

The whole signal can now be painted, white for the mast and black for finial, driving motor, lamp casings; landings and ladder. The base could be painted to simulate a concrete one.

The Under Baseboard Gear

This gear for operating the signal blade is in the form of an electro-magnet, the armature of which is provided with a double-ended rod. One end of the latter is connected to an oil dash-pot and the other to the signal blade operating thread.

When the magnet coil is energised, the armature is attracted towards the magnet core but instead of moving suddenly, the rate of movement is slow, being controlled by the dash-pot piston moving through the oil and depends on the amount of clearance between the edge of piston and wall of dash-pot cylinder.

The general arrangement of the gear is shown in Figure 12 and shows the normal position with signal at Stop.

When the coil is de-energised, the dash-pot piston moves down slowly by gravity and allows the signal blade to return to the Stop position. The magnet coil and armature form part of an old type telephone switch-board drop shutter mechanism and may be available on the disposal market or from the PMG Department.

If this gear is not available, then it will be necessary to devise some other arrangement of magnet or solenoid that can be assembled to work with the dash-pot and swivel hook to operate the operating thread.

Figure 13 shows some detail of the mounting board and method of securing to the under side of baseboard. The slots permit the mounting board to be offered up to the baseboard with the securing screws and washers already in the latter and moving the mounting board about to centre the swivel hook directly under the operating thread and then tightening up the securing screws.

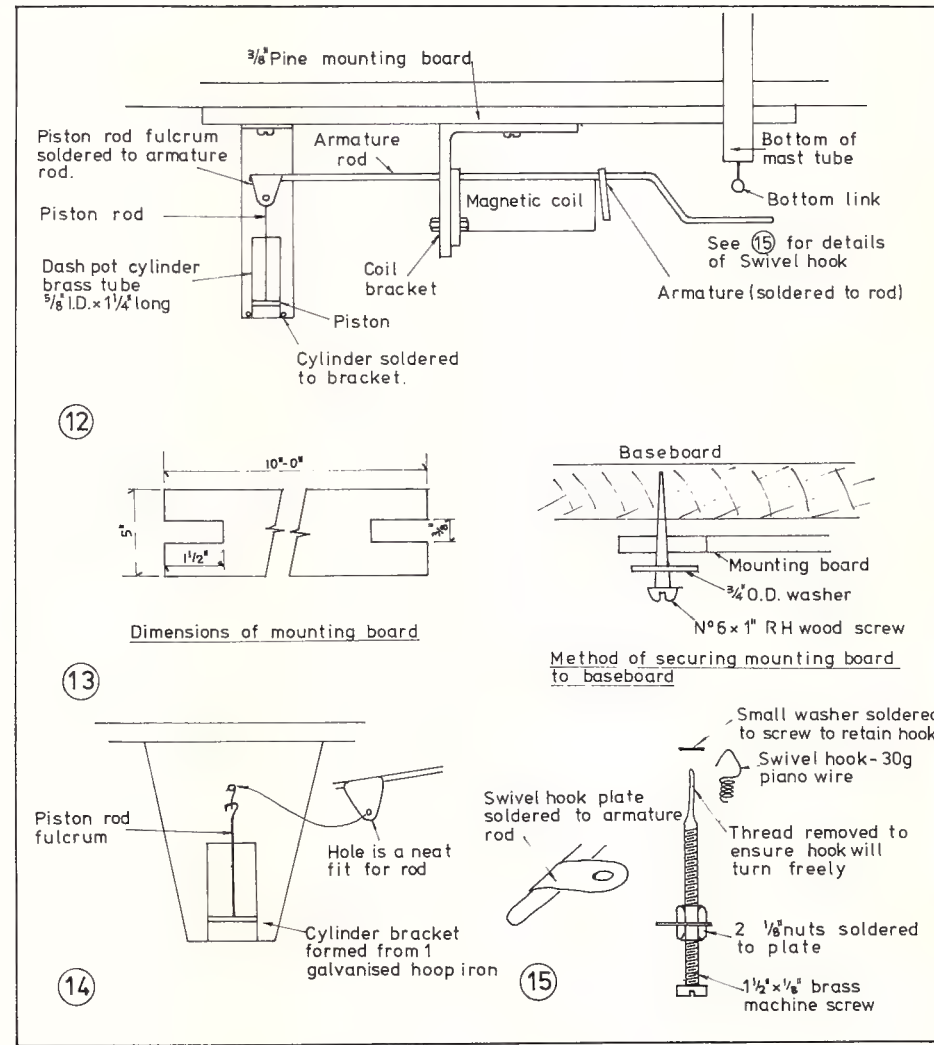
Whatever scheme of operating coil or solenoid is finally evolved, it is important to note the following special points in regard to the armature rod, dash-pot and operating thread swivel hook fixed to the armature rod.

1. The armature rod should be stiff, without flexing when moving. A motor-cycle wheel spoke is ideal and readily available.
2. The dash-pot piston rod hook must be a neat fit in the hole of the fulcrum to ensure the armature is always under control of the dash-pot during movement so that the signal blade moves smoothly and slowly throughout full movement. A small piece of plastic tubing over the end of piston rod hook will prevent it slipping out of the fulcrum hole. A medium grade of motor car lubricating oil is suitable in the dash-pot. The piston should be made a neat fit in the cylinder at first and filed smaller later to get the most suitable rate of movement. (Figure 14).
3. Figure 15 shows the detail of operating thread swivel hook which is provided to prevent twisting the thread when moving hook up and down to get the right position

of the hook in relation to the thread bottom link.

The apex of the hook should just sit in the bottom link eye with the signal blade at Stop. A little slack can be allowed here to ensure that when the coil is energised and the hook

moves down, there is no pressure on the blade spindle crank against the bottom lip of crank slot in upper mast tube otherwise this soldered joint may break. The crank should just touch the bottom lip of the crank slot in the Clear position of the blade.



COMPENSATING PMH PLASTIC BOGIES

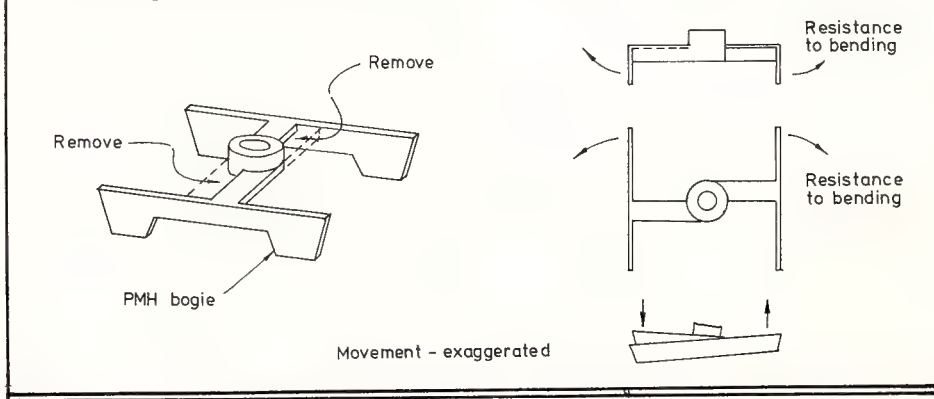
As each new association appears adopting finer standards it brings with it new answers to old problems. The extremely fine wheel flange of the P4 association requires the fitting of springing or compensation to bogie stock as well as 4 wheelers.

Having seen the benefits of compensation (indeed, wherever possible I use sprung bogies of American origin), I decided to modify my bogie stock. These bogie units were the PMH type and immediately I ran into the problem of having less room between the pivot block and the bogie frame than the 4mm ones.

Therefore the following modification was adapted.

Instead of the original torsion bar method used in the P4 system, I decided to utilize the existing spreader bar. On close inspection this will be seen to be of a channel section. I cut away half the width of the spreader bar on diagonally opposite sides. (See sketches). This leaves an angle section which, fortunately, is sufficiently strong enough to resist any tendency to bending outwards but flexible enough to allow the wheels to follow any discrepancy in the track.

Roger Johnson





SELECTING CAMERA EQUIPMENT FOR RAILWAY PHOTOGRAPHY

Above

I made mention in the accompanying story of my love of today's electronic shutter (shutter-priority) cameras — and their ease of operation. The above illustration, I feel, shot at Dynon depot in May 1976 should be evidence of my claim for it was taken with an electric shutter instrument set on automatic. The method was simply set the camera onto a tripod, fit a cable release and blaze away with a small f-stop (for depth of field). In this case I used f.11 with the shutter exposing for around 3 second with FP4 film rated at 200asa. Such pictures can also be made using fill flash where necessary and the camera will automatically shut off when enough light reaches the film. (Nikkormat EL).

Up until recent years, the majority of railway enthusiast photographers have taken most of their photographs with "standard" type lenses. There are a few definite reasons for this, the best being that up until a decade or so ago, 35mm Single Lens Reflex (S.L.R.) hand cameras (instruments which can also easily interchange lenses) have fallen into practically everyone's price range.

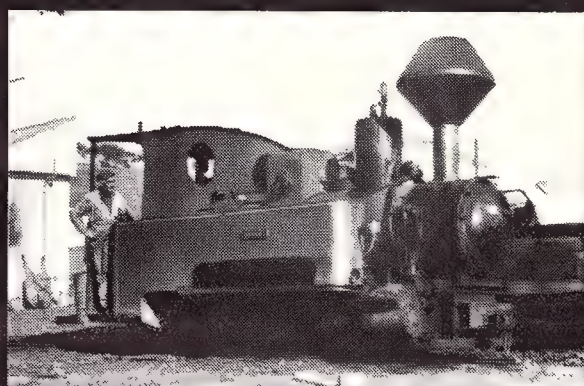
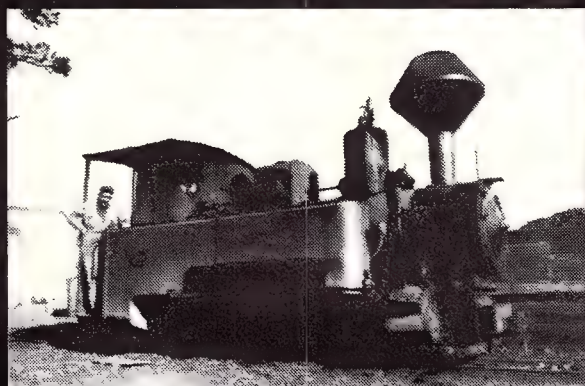
In fact, with so many makes and models of 35mm SLR's currently on the market, and their hosts of accessories, including large arrays of different focal length lenses, photography on a more advanced and skilled level is within the reach of everyone.

It is a fact to say that every SLR on the market today is capable of producing a top professional-looking photograph in general

photographic situations. For instance, the cheapest SLR's will provide a good clean black and white 8 x 6 print practically every time should the photographer be steady on the button and "have his light right".

So, why buy more advanced cameras many readers will now cry!

Well, the answer is quite simple, and it hinges on the individual photographer's actual needs. For instance, should standard 'super-size' (around post-card) record shots — or the usual colour slides for simply home viewing be the forte — slides onto which one will often dose with finger prints — or carry in the wallet for dust or other rubbish to collect onto — any efficient cheap focal plane shutter machine will be the answer. If it has a light meter, all the better.



PHOTOGRAPHICALLY SPEAKING CONDUCTED

by
Leon Oberg



On the other hand one desires to take pictures in more difficult situations (ie. long shots across paddocks, or in tricky lighting), and show the results at occasional club or enthusiast meetings — or have the results published in club house magazines, the cheaper type SLR machines will provide enough lens resolution for the job. One must be careful with many of these cameras though, for with the rugged rough and tumble of railway outdoor photography, these machines tend to have a high incidence of maintenance, including shutter and transport replacement. In addition, some rarely boast a shutter speed over 1/500th, thus they are not really fast enough for certain situations.

In addition, some cameras are extremely fiddly to operate, particularly one popularly advertised seemingly attractive cheap SLR imported brand. This camera's lenses still use the old system of non-automatic diaphragm and many mistakes can occur for there are, in effect, two aperture rings to master. This system is decades old and should not be entertained; not only does it confuse beginners, but is a nuisance generally for it adds extra slowness of operation.

However, should one take the view that everything shot today is tomorrow's history and that, despite the cost at present, the pictures should be good enough to meet the highest of future publication printing standards, then only a personal study into the best available will be necessary to meet the operator's individual taste.

The equipment should be able to accept any accessory, have renowned lens quality, be rugged enough to hold together through years of bumping around in all conditions (dust and rain) and keep on giving potentially excellent results with just a minimum of attention (ie. occasional check-ups).

As I mentioned earlier, any SLR will provide the operator with an 8 x 6 black and white print. Some blow-ups from these cameras often begin to break-up past this size, particularly pictures shot through cheap tele-lenses. With colour publication — or expected high resolution slides for pride viewing standard, cheap cameras can often become a liability.

On the other hand, top quality lenses (generally the dearest for this reason) will



A typical result from a cheap (non-reflex) camera, which I trust when published will give an indistinct re-production, particularly on the edges, even printed this small. On this occasion, VR's B80 was rolling into Benalla with a Down freight on the morning of September 10, 1968.

provide the maximum possible resolution from today's magnificent lens technology.

Visitors to any display of press photography can rest assured that the majority of the exhibited 20 x 15 or 16 x 12's are from high quality 35mm equipment. This is often despite rapid chemistry.

With fully controlled chemistry it is possible to provide a print much larger than those above and in fact only recently I completed an aerial job for an industrial client with a blow-up measuring a practically grain free 3ft x 2ft — and from a 35mm camera!

Lenses too.

Lenses also fall into the above categories. One can buy a host of cheap teles, some up to 300mm, for under \$200. One may as well swim with feet tied as expect decent consistent results from these, but I hasten to add that for the person who simply needs his "super-size" album pictures — or home slide shots where quality is not all that important, these lenses have their place.

Let me say that cheap lenses are often 'soft'. Even some high-priced Zooms are, too. In short, the image suffers, and usually the

edges are not sharp.

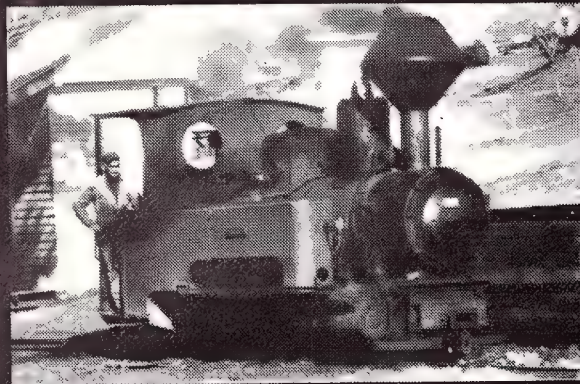
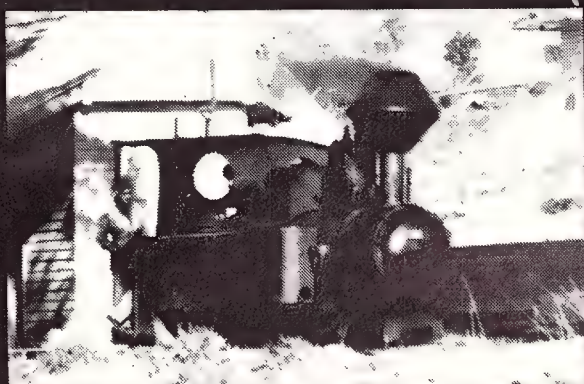
I know only too well that NOT EVERYONE wants to concern themselves with the BEST possible equipment. Indeed, unless a person is taking photographs all the time (and has every operation and function down mechanical-like), the best equipped photographic suitcase could well be a total waste, for the subject will often have passed-by before the gear is even set-up.

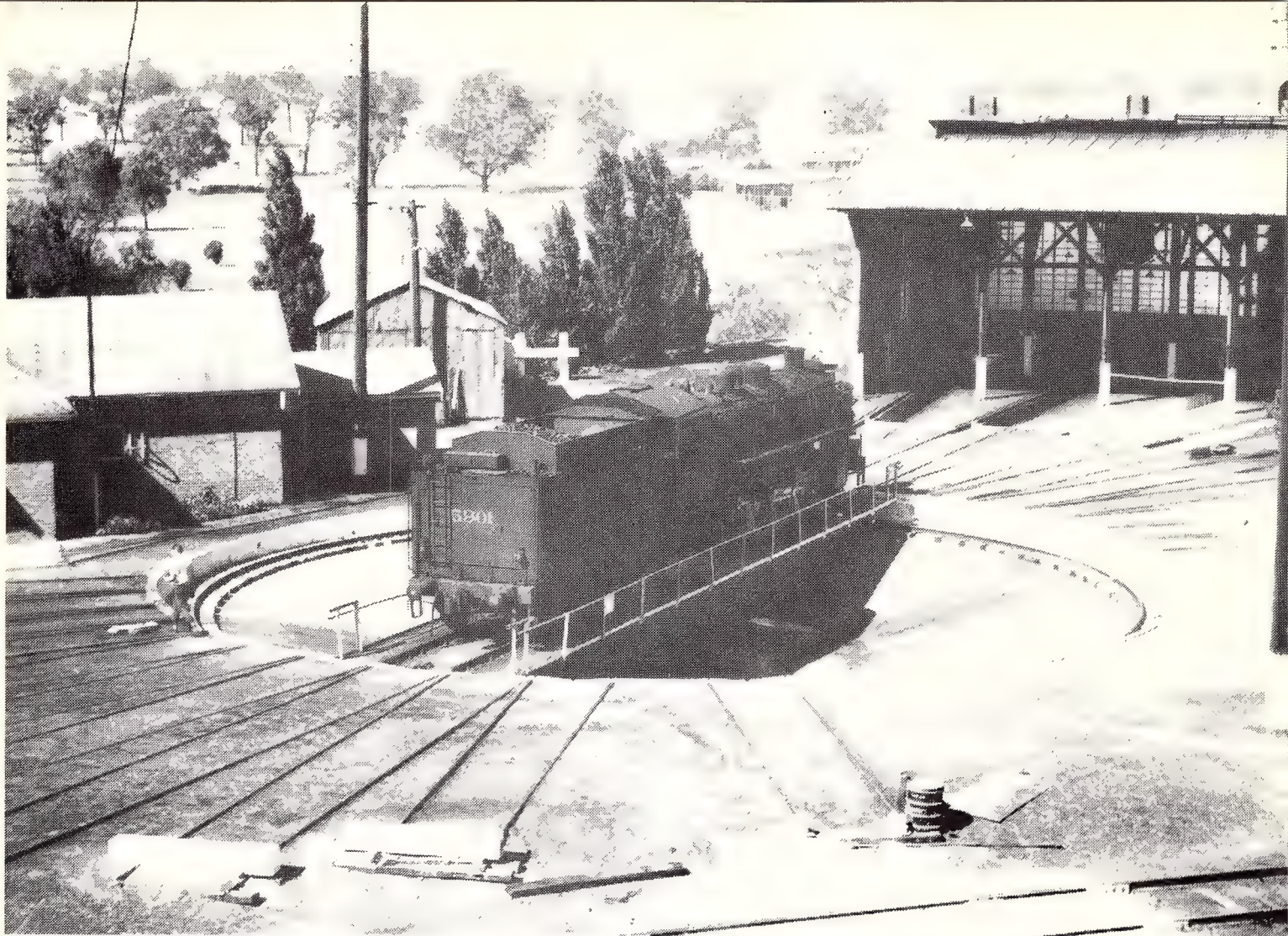
Generally speaking, however, the reader who really wants excellent results from easy to use equipment and be able to shoot practically all railway pictures available can not really go past today's electronic shutter cameras (and quite a number of really good ones are now available). They actually take the thinking out of shooting and, providing the operator does nothing silly (like expect to shoot 64asa film of a speeding express train in bad light with the aperture set on f.16), the results can be excellent.

Because of their unconventional operation, many photographers shy off electronic-shutter cameras. Its surprising really for their workings are simple, with the shutter-speeds providing an infinite number of settings from

Continued on page 34

The strip below is a very "hasty" attempt to indicate the performance of various focal length lenses. The mini series indicates Goulburn Steam Museum's O-6-OT Krauss, "Stella" in four views, the first (far left) being taken with a wide-angle 28 mm lens (not really the best lens for railway pictures due to distortion, but good for tight access). The next is taken with a standard 50mm unit whilst the third is with a 135mm medium tele. Finally we see the 250mm lens at work. Incidentally, both the 135mm and the 250mm pictures were taken with an average zoom and even printed at this small size it will be noted that their edge sharpness is sub-standard (see article text).





5901 on the 75ft turntable at Muswellbrook in November 1968. (Photo by Alan Templeman).

N.S.W.G.R. Turntables

First of a series by Alan Templeman

This article is a general review of the types of turntables in use in N.S.W. in the latter days of the steam era. A selection of photographs illustrate these. Many of these turntables are still in use in the diesel era, but quite a few have been placed out of service or removed completely.

In later issues of "A.M.R.M." scale drawings of the five standard turntable types used in N.S.W. in the post 1945 period will appear, plus more photographs to assist the modeller who wishes to build a N.S.W.G.R. turntable.

Locomotives that require turning.

As a general rule in the days of steam in N.S.W., tender locomotives were turned at the end of each journey, and tender first running kept to a minimum. When running tender first there were usually speed restrictions, and conditions for the loco crew were obviously rather uncomfortable. Tender first running was restricted to short trips, such as the coal trains running between the exchange sidings at East Greta Junction and Hexham and Port Waratah. With these trips the locos worked the empties from Port Waratah tender first, and returned with the loaded train smokebox leading.

Some of the earlier N.S.W. diesel electric locomotives, the 42 and 43 classes of the "cab" type also have (or had in the case of the 43) to be turned as full controls were only fitted at the No. 1 end. The controls at the No. 2 end did not include a train brake, only an engine brake. The "hood" type of diesel such as the 40 class (now extinct) and the 45 class are usually turned at the end of a journey, if turning facilities are available, so that the short hood is leading, giving the crews greater visibility.

The smaller hood units of the 47, 48 and 49 classes are also usually turned where there

are still turntables in existence and serviceable, but as these units operate on branch lines and many of the branch line turntables have been placed out of service to save on the cost of maintenance this is not always possible. Also, where the 48 class are used on commuter passenger runs, such as on the Illawarra line and around Newcastle, they are not turned at the end of a trip but merely run around the train.

The newer mainline diesels of the 421, 422, 44, 442 and 80 classes, and the 46 class electric locos do not require turning as full cab facilities are fitted at both ends of the loco.

Returning to steam days, tank locomotives were not normally turned, and the AD60 class Beyer Garratt locomotives that were fitted with dual controls (controls on both sides of the cab, so that the driver could drive from the left hand side of the cab whether the loco was travelling with the boiler leading or the bunker leading) also did not require turning. The unmodified AD60's with controls on left hand side of the cab only with the boiler leading did require turning.

For those readers not familiar with the N.S.W.G.R. Beyer Garratt AD60 class a word of explanation is probably required here. As

originally delivered the AD60's had controls on one side of the cab only and had an axle loading of 16 tons. At a later stage a number of the class were fitted with dual controls (and had DC painted on the buffer beam with the number) and had their cylinders bored out to a larger diameter (from 19¼" to 19¾", an increase of ¼") to give more power. The weight distribution of the thirty locos so treated was altered so that the weight on the driving axles was increased. The axle loading of these locos was increased to 18 tons, and their tractive effort increased by over 3000lbs. (The tractive effort was increased from 59600lbs. to 63000lbs). These so called "heavy" Garratts were more restricted in the lines they could work due to the increased axle loading. The unmodified Garratts were known as "light" Garratts, although both versions weighed 260 tons.

Triangles

An alternative method of turning locomotives is the triangle (called the wye in U.S.A.). These take up more room than turntables, and have not been common in N.S.W. solely for the purpose of turning locomotives. Examples of triangles installed solely for the purpose of loco turning are (or were at Gwabegar, Muswellbrook,

Bungendore and Caragabal. Of these the one at Gwabegar is the only one still in existence. However, many junctions of branch, cross country and main lines in N.S.W. have two forks forming a triangle, and these have been much used for turning locomotives (particularly the "light" Garratts). Such a case is Goobang Junction near Parkes, where the cross country line from Stockinbingal joins the Parkes-Broken Hill line. There are many junctions of this type throughout N.S.W., installed primarily to enable trains from the branch or cross country line to run onto the main line in either direction, but used also for turning locomotives. Sometimes a second fork has been added to a junction solely to enable locos to be turned. An example of this is the northern fork of the junction of the Unanderra-Moss Vale line with the Main Southern line at Moss Vale. This was added so that D57 class 4-8-2 locos, too big for the 75ft. turntable at Moss Vale, could be turned.

Because they take more space than turntables, triangles are rarely included in model layouts as a means of turning locomotives, but for someone with the space available it presents an interesting variation.

Sizes and Types of Turntables in N.S.W.

In the post-1945 period in N.S.W. there were five standard sizes of turntable in N.S.W. There were 50ft., 60ft., 75ft., 90ft., and 105ft. There was also the odd man out — the 100ft. turntable at Junee. Presumably when the Junee depot (opened in 1946) was planned, a locomotive larger than the D57 and D58 classes was envisaged, but not quite as large as the AD60 which, with a wheelbase of 98ft., would have been a tight fit on the 100ft. turntable. When the AD60 class entered service they were turned on the triangle at Junee, where the line to Narrandera junctioned with the main line. The other two non-standard turntables were those at Jerilderie, on the Narrandera-Tocumwal line, and at Bringagee, on the Hay branch. Each was 51ft. 6ins. Presumably these were obtained from Victoria, where 51ft. 6ins. was a standard turntable size. Possibly some reader can cast further light on the origin of these two turntables.

In the early days of N.S.W. railways 40ft. turntables were also standard, but these had all long gone by 1945. As larger engines were built, requiring larger turntables at the main depots, the smaller turntables thus displaced were used in turn to replace still smaller turntables at other locations. Thus some turntables during their life were used at two and sometimes more locations.

Returning to discuss the five main sizes in use since 1945, following is a list of most of the locations at which the various sized turntables were situated (and in many cases still are suitable):-

105ft. turntables.

Enfield, Broadmeadow and Werris Creek.

90ft. turntables.

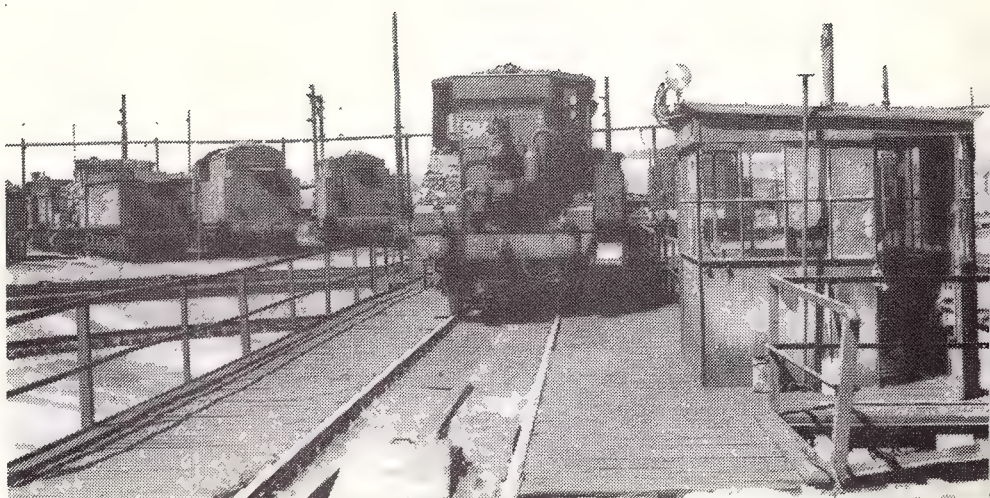
Enfield, Thirroul, Goulburn and Lithgow.

75ft. turntables.

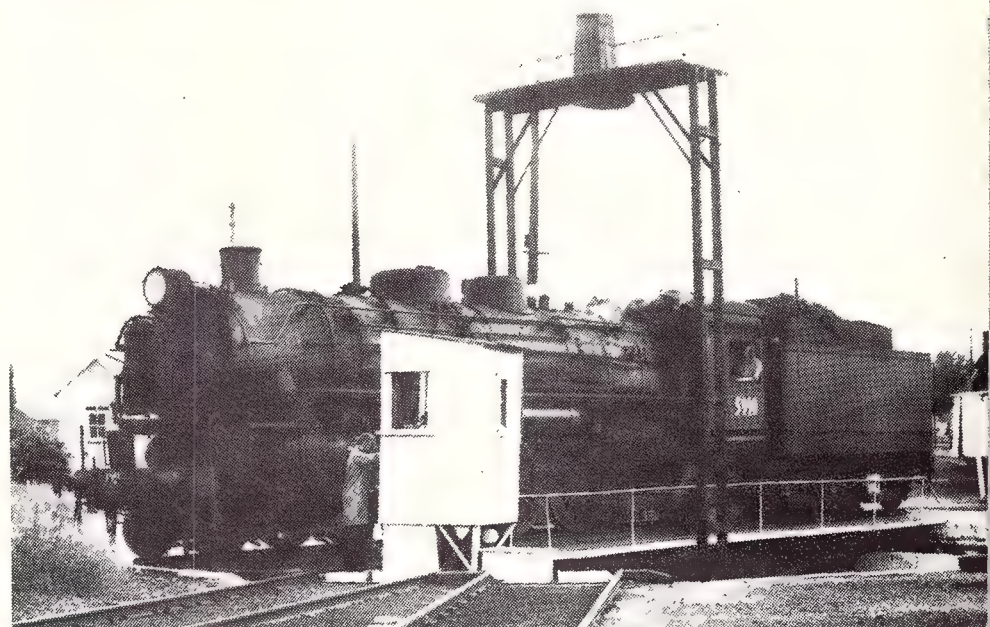
Gosford, Wyong, Cardiff Workshops, Broadmeadow, Taree, Casino, Yerrongpilly (not in N.S.W. but on the N.S.W.G.R. operated standard gauge extension to South Brisbane), Eveleigh, Enfield, Delec, Chullora Workshops, Moss Vale, Harden, Albury, Canberra, Mt. Victoria, Orange, Kandos, Cowra and Muswellbrook.

60ft. turntables.

Singleton, Murrurundi, Willow Tree, West Tamworth, Walcha Road, Armidale, Glen Innes, Tenterfield, Port Waratah, Dungog, Kempsey, Coffs Harbour, Glenreagh, South Grafton, Dorrigo, Murwillumbah, Merriwa, Moree, Mungindi, Narrabri, Inverell, Penrith, Richmond, Hornsby, Waterfall, Wollongong, Kiama, Summit Tank Nowra, Picton, Cullen



5114, with 4 wheel shunting tender, on the 105ft. turntable at Enfield No. 3 shed in 1963. (Photo by C.H. Pratten).

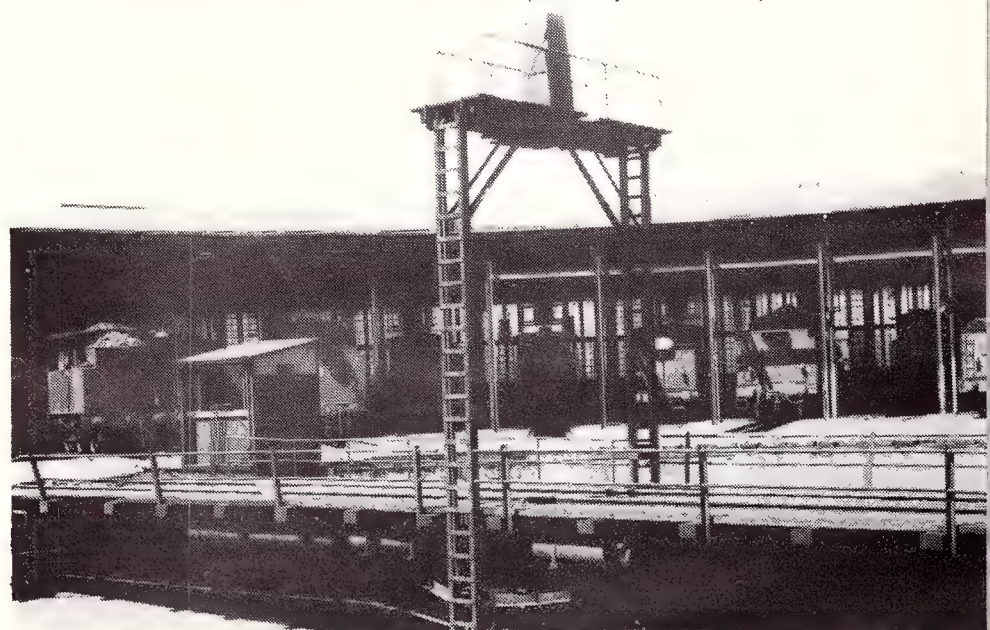


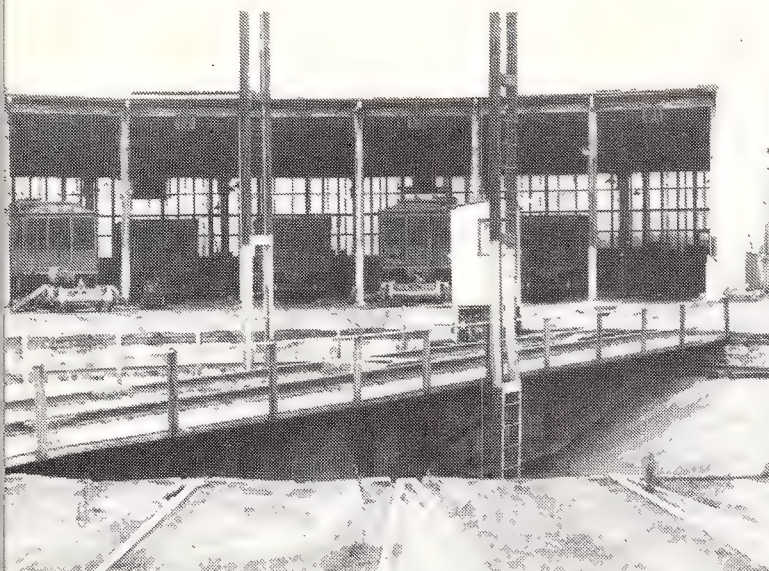
Above

5910 on the electrically operated 60ft. steel turntable at Bathurst in March 1974. Note the power collector arch. (Photo by Alan Templeman).

Below

The 90ft. turntable at Enfield No. 1 shed in 1963. (Photo by C.H. Pratten).

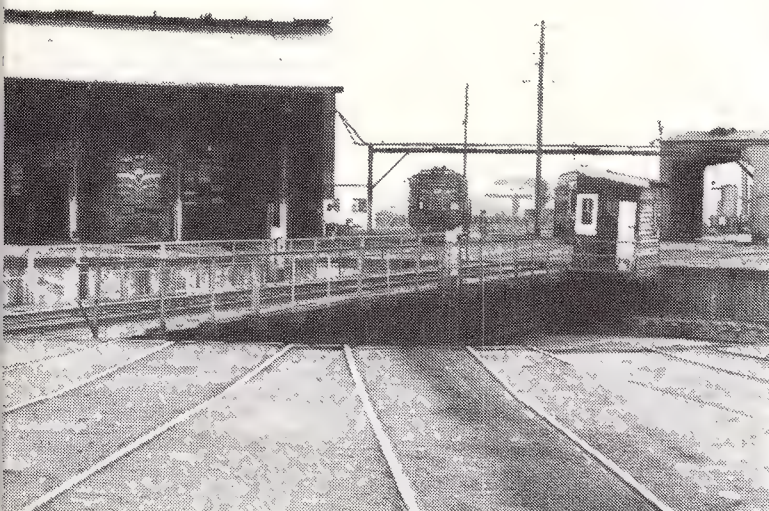




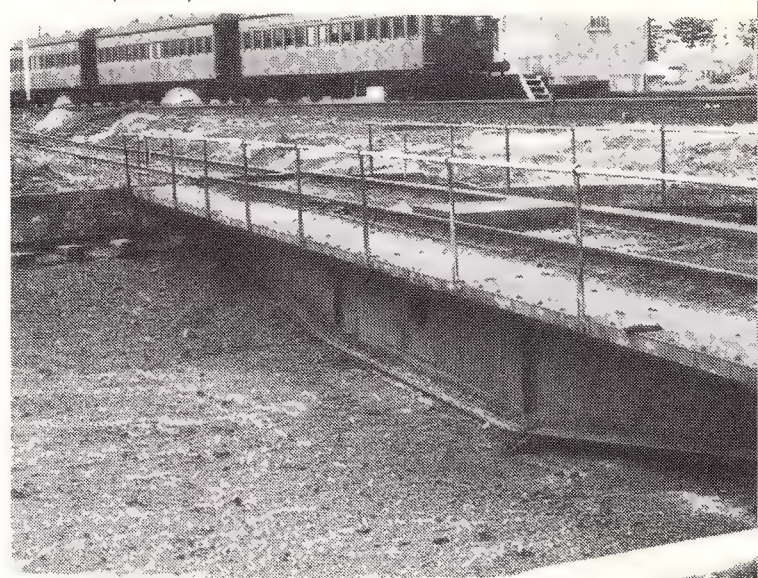
The 75ft. electrically operated turntable with power collector arch at Broadmeadow No. 2 shed in December 1975. Following the end of steam working this shed has been used for wagon repairs. (Photo by Alan Templeman).



The 60ft. cast iron turntable at Wallerawang in December 1967. Note the interesting step formation of the pit. (Photo by Alan Templeman).

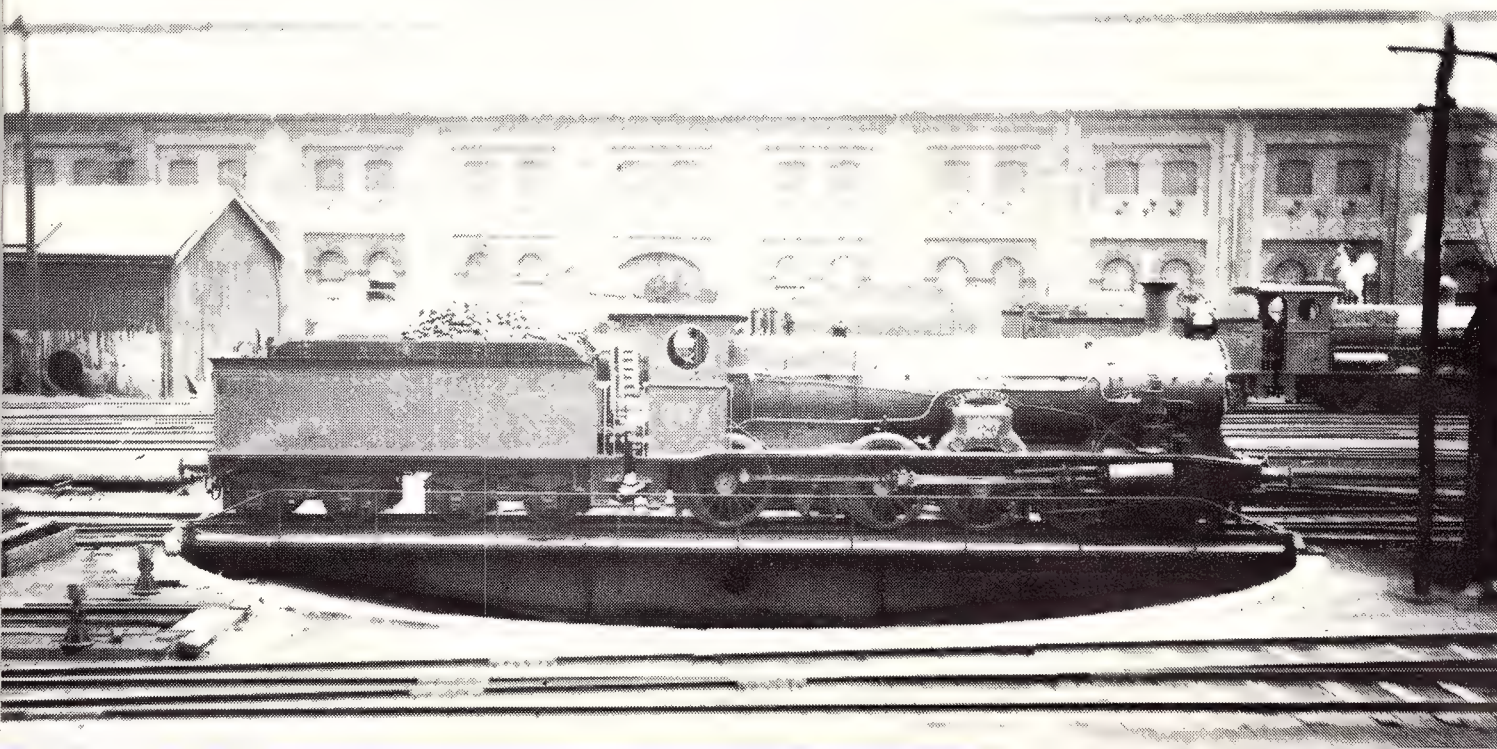


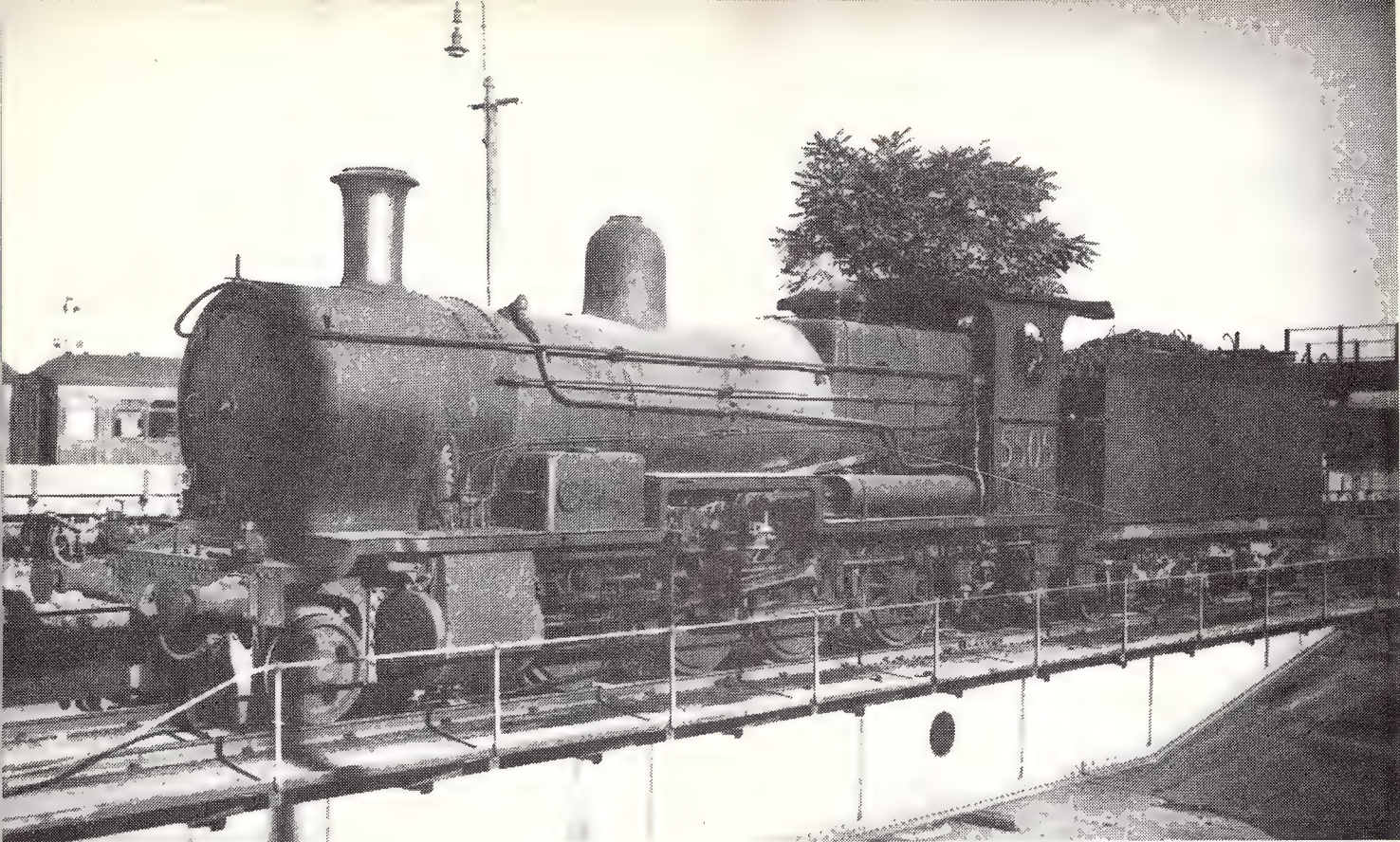
The 105ft. turntable at Broadmeadow No. 1 shed in December 1975. (Photo by Alan Templeman).



The 60ft. steel turntable at Kiama in August 1973. Note the brick wall around the ash lined pit. (Photo by Alan Templeman).

3374, in green livery and carrying the name "Cambewarra" (for working the South Coast Daylight Express), on the 60ft. steel turntable at Eveleigh in September 1935. (Photo by J.L. Buckland).



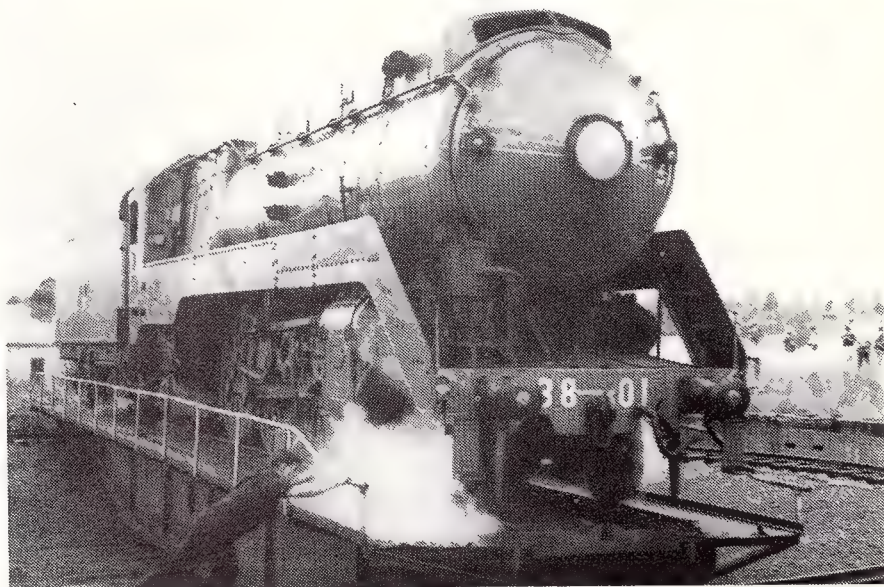


Above

5505, in original condition with tapered boiler and all flanged drivers, on the 75ft. turntable at Albury in September 1935. (Photo J.L. Buckland).

Centre

3801 is turned on the 75ft. turntable at Moss Vale in March 1970. Note the brick pit wall, and ash covered pit floor. (Photo by Alan Templeman).



Below

Superheated C30T class 3009, fitted with 6 wheel tender, on the 50ft. steel turntable at Eugowra in 1963. Note the very shallow earth lined pit, and elevated approach track. (Photo by C.H. Pratten).

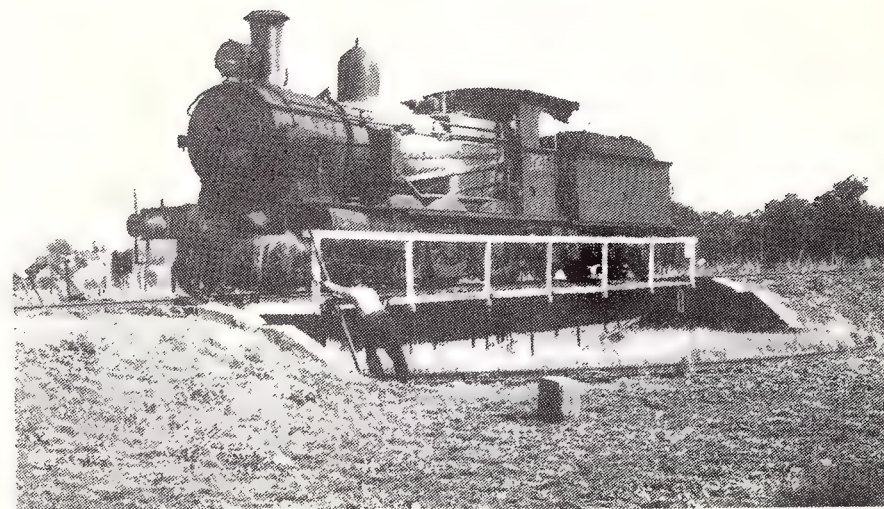
Bullen, Narrandera, Cootamundra, Wagga Wagga, Uranquinty, Culcairn, Crookwell, Queanbeyan, Captain's Flat, Cooma, Bombala, Temora, Wyalong, Central, Lake Cargellico, Griffith, Hillston, Rankin's Springs, Burcher, Naradhan, Hay, Tocumwal, Tumbarumba, Corowa, Valley Heights, Katoomba, Wallerawang, Bathurst, Wellington, Blayney, Dubbo, Narromine, Nyngan, Bourke, Mudgee, Gulgong, Merrygoen, Binnaway, Baradine, Coolah, Lyndhursts, Molong, Parkes, Forbes, Condoblin, Broken Hill, Peak Hill and Tottenham.

50ft. turntables.

Maitland, Kyogle, Lismore, Byron Bay, Garah, Wee Waa, Boggabilla, Manilla, Barraba, Campbelltown, The Rock, Tumut, Batlow, Kywong, Oaklands, Nevertire, Byrock, Canowindra, Eugowra, Grenfell, Bogan Gate, Coonamble, Cobar, Brewarrina and Finley.

General Notes on N.S.W.R. Turntables

The older 50ft. and 60ft. turntables were constructed from cast iron, whereas the newer 50ft. and 60ft. turntables, and all the 75ft., 90ft. and 105ft. turntables were of steel construction. All the 50ft. turntables were operated manually, which required that the locomotive be balanced on the turntable, that is positioned so that all the weight is on the central pivot, and none is on the supports at the ends (the wheels on the circular rail). Many readers will have fond memories, as I



have, of watching the delicate easing backwards and forwards that was necessary to balance a steam locomotive on a manually operated turntable. Once the locomotive was balanced on the turntable, the turntable and its load could be pushed around by two men, usually the fireman and the guard.

Most 60ft. turntables were manually operated, but a few (such as Bathurst) were electrically operated. The 75ft. tables were power operated at larger depots, but a number of 75ft. tables (such as Wyong, Moss Vale and Muswellbrook) were manually operated. The 90ft. and 105ft. turntables were all electrically operated.

The power for the operation of the electric motor on power operated turntables was collected from overhead wires by a power collector arch (also colloquially called a gallows) on early electric turntables. On later electric tables the power came up through the central pivot point, and some of the earlier electric tables were converted to this method of power collection, eliminating the need for the power collector arch (for example the 90ft. turntables at Lithgow and Goulburn, originally fitted with power collector arches, now receive their power via the central pivot point, and the arch has been removed). Some electrically operated turntables, however, still receive their power via a power collector arch (for example Bathurst).

The 50ft., 60ft. and 75ft. turntables were all of the single span variety, while the 90ft. and 105ft. tables were twin span. Twin span tables are composed of two spans articulated in the centre so that the weight of the locomotive is spread over all three bearing points (the central pivot point and the two ends).

Notes on the various size turntables

When discussing the sizes of locomotives that could be accommodated on the various sized turntables I have only mentioned those classes of steam locomotives in service from 1945 onwards.

50ft. turntables

As mentioned earlier these were either of cast iron or steel construction, single span and all manually operated. The largest locomotives that could be accommodated on 50ft. tables were the C32 and C30T 4-6-0 locos when fitted with 6 wheel tenders. Several C32 class were kept fitted with 6 wheel tenders so that they could be turned on the 50ft. turntables at Campbelltown and Maitland after working commuter trains to these two locations. If a C32 with bogie tender had to be used on a Maitland train it could be turned on the triangle formed by the junction of the North Coast line with the Main Northern line at East Greta-Telerah-Farley, but if a bogie tender fitted C32 was used on a Campbelltown train, it had to be sent light engine to Picton to turn on the 60ft. table there, involving a round trip of some 40 miles. When a C30T with bogie tender had to be turned on a 50ft. table at a country branch terminus, as sometimes occurred, the loco and tender had to be separated and turned individually. When the loco and tender had been separated recently this was no great problem (although naturally time consuming), but if the loco and tender had not been separated for some time the procedure could be quite difficult because the wedges would be hammered tight by heavy loads.

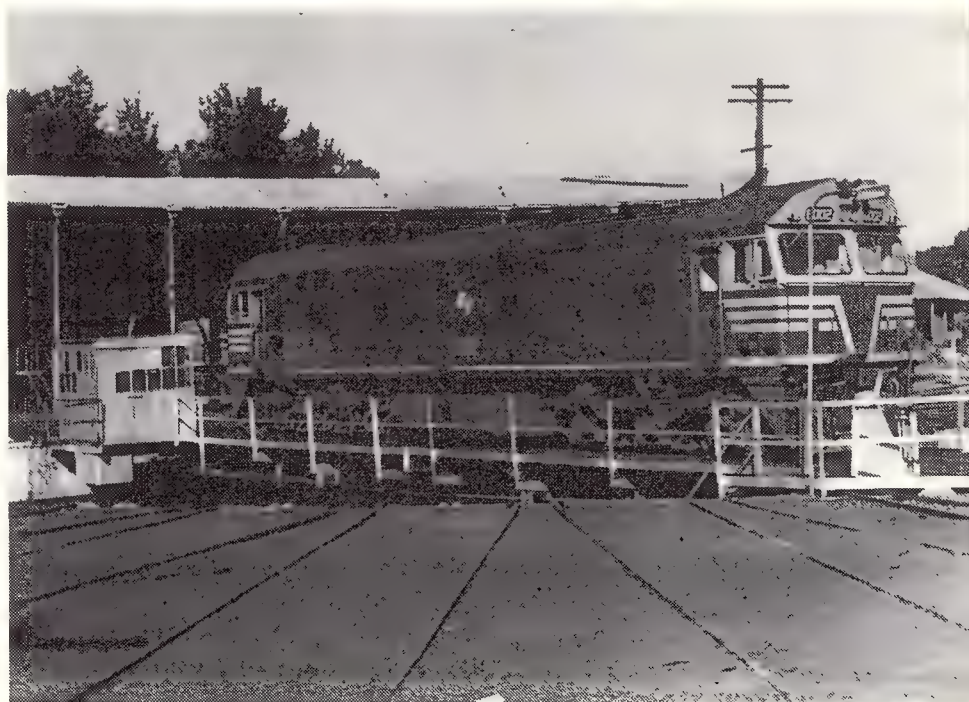
60ft. turntables

The most numerous sized turntable in N.S.W. As with the 50ft. tables they were either constructed from cast iron or steel, were single span and most were manually operated. A few, such as Bathurst, were electrically operated. They could accommodate C32 and C30T class 4-6-0 locos with bogie tenders, the three classes of "standard goods" 2-8-0 locos (D50, D53 and



The 105ft. turntable at Enfield No. 3 shed in 1963. (Photo by C.H. Pratten)

8002 on the 90ft. turntable at Lithgow in May 1979. This table originally had power collector arches. (Photo by Alan Templeman).



D55 classes) and the C35 4-6-0. The D59 class 2-8-2 could be turned on some 60ft. tables, but not all, due to clearance problems. The C36 class 4-6-0 could only be turned on electrically operated 60ft. turntables, as it could not be balanced on a 60ft. table due to the length of its wheelbase. A C36 could be turned on a manual 60ft. table in an emergency by separating the loco and tender, but this was a rare procedure.

75ft. turntables

These were all of steel construction, single span, some were powered and some manual. They were installed for the use of the C36 class 4-6-0 locos and later were used by the C38 class 4-6-2 locos as well. One intriguing 75ft. table is that at Kandos, as the Mudgee line was "off limits" for C36 and C38 locos.

90ft. turntables

These were installed at the time of the introduction of the D57 class 4-8-2 locomotives in 1929 and, as mentioned earlier

were of steel construction, were of the twin span type and were electrically operated. As originally built they were fitted with power collector arches to collect the power for the electric motor from overhead wires, but the two 90ft. turntables remaining in service (at Lithgow and Goulburn) have had the power collector arch removed and receive the power via the central pivot point. It is interesting to recollect that the D57 class were severely restricted in the routes over which they could operate due to their high axle loading. When introduced in 1929 the D57 class were placed in service on the Illawarra line between Enfield and Thirroul. In 1930 they commenced working over the Blue Mountains between Enfield and Lithgow. It was not until 1932 that they commenced working on the Southern line, initially between Moss Vale and Cootamundra (the engines for these workings being based at

Continued on page 29 and page 34



On the eleventh of October 1971 the A.R.H.S. operated a tour on the narrow gauge to Black Rock. Freshly painted 858 had not had time to gather the usual heavy coating of red dust typical of Peterborough based on engines during summer months. In the foreground is a plant known as either Salvation Jane, Patterson's Curse or Wimmera Bluebell depending on which State you call home. In June 1973 the loco exchanged the chopper couplings and narrow gauge bogies for knuckle couplers and broad gauge bogies and went South to Mile End. Agfa slide by Phil Curnow.

THE 830 CLASS

by Phil Curnow

The 'mustard pot' is South Australia's "Jack of all trades"

In December 1959 the SAR received the class leader number 830 and issued it to traffic on the eighteenth of that month. The new diesel had an axle load of only twelve tons as it was intended to replace the Rx class 4-6-0 steamers on branch line and other light duties. Eventually the total was to grow to 45 engines operating on three gauges. They were not delivered in numerical order so by looking closely at the date of issue we find that 830 to 339 (delivered from December 1959 to June 1960) went to Murray Bridge; 839 and 851 (delivered March 1962 and April 1962) went to the Port Lincoln narrow gauge; 840 to 844 (delivered from May 1962 to October 1962) went to Mile End (Adelaide); 856 and 857 (delivered in February and April 1962) went to the Port Lincoln narrow gauge; 858 to 867 (delivered from May 1963 to August 1963) went to the Peterborough narrow gauge; 854, 852, 853 and 855 (delivered in that order from September 1963 to October 1963) went to Port Lincoln; 845 and 846 (delivered in October and November 1963) went to Mile End; 871 to 873 (delivered from February to April 1966) went to Port Lincoln; 847 to 849 (delivered from June to September 1969) went to standard gauge at Peterborough after they had worked for seven months, one month and nil months respectively on the broad gauge; 868 to 870 (delivered from November 1969 to January 1970) went to standard gauge at Peterborough, although

868 first spent a month on the broad gauge. Confusing isn't it?

Prior to the opening of the standard gauge between Port Pirie and Broken Hill broad gauge 840 was transferred onto narrow gauge to release a diesel for conversion and overhaul. As each was completed it went into storage and the garratts and T class steamers had their last fling on the ore trains. The chassis of the narrow gauge group of 830s at Peterborough were strengthened to take the shocks and heavy loads of the ore trains. 840 had not been modified so it usually had to be the leading engine when running in multiple. After the narrow gauge was replaced in January 1970, a reshuffle of engine allocations occurred and 856 and 857 were sent to Port Lincoln, having remained as narrow gauge engines. The SAR purchased loco 27 from the Silverton Tramway Company and it ran for quite a time in its red and grey colours until going into the workshops for an overhaul. It emerged as mustard pot 874.

858, 865, 866 and 867 were retained to work the Peterborough to Quorn and the isolated Gladstone to Wilmington narrow gauge lines. Traffic on the Quorn line declined so 858 was transferred to the broad gauge based at Mile End in June 1973 where it ran for some time without route indicators, which are required on broad gauge diesels. 867 remained at Peterborough and if it breaks down or derails

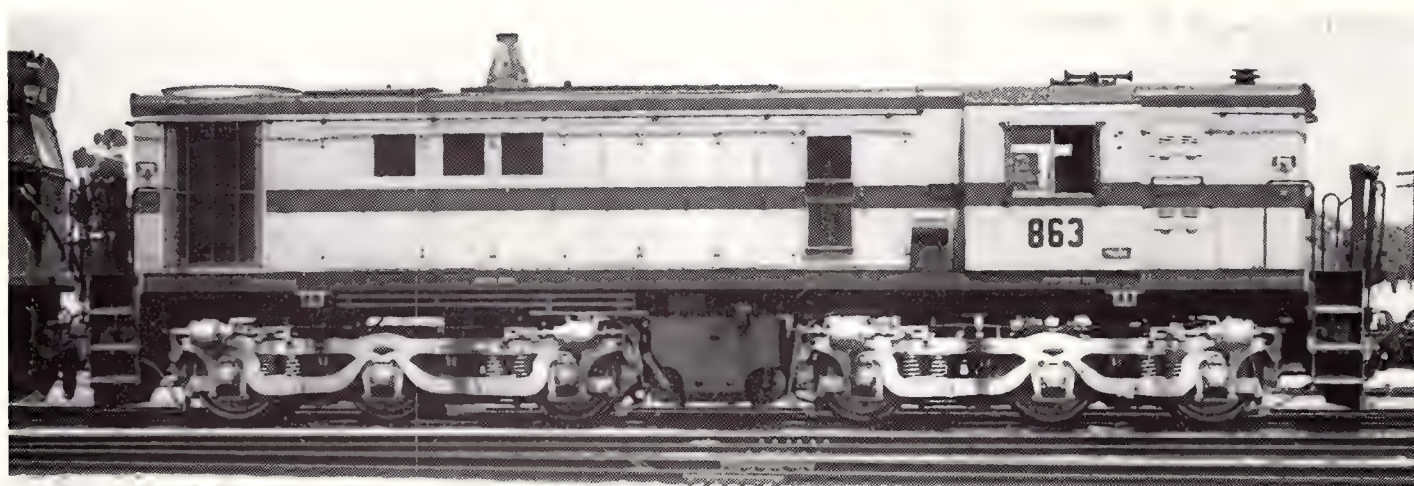
a standard gauge 830 is fitted with narrow gauge bogies and sent to assist. Because of a lack of lifting equipment at Gladstone two engines remain there. With the ANR now in control we may see the closure of both lines, or perhaps they could use the engine transfer flat wagon to carry a narrow gauge engine from Peterborough to Gladstone in cases of failures as this would save having a second loco kept for the two or three times a week service.

847, 848 and 849 were hired to the NSW Railways in 1974 and are still there five years later. The ANR takeover on 1/3/79 has brought a few changes. 830 and 845 have joined the Metrorail and are hired by the ANR as required. These two are the only ex-SAR diesels permitted to retain the piping shrike emblem. Standard gauge 830s were in use at Port Augusta as shunters and have replaced older engines elsewhere.

If you still cannot make up your mind as to which number to place on your Bergs Brass model, consider the engines that have had their moments of glory. As mentioned, 830 was the first to be issued while 850 received the flags and bunting treatment because it was the first narrowgauger. 846 and 959 were in a collision at Mount Lofty in 1971 and 846 had to have its chassis straightened afterward. Similarly 874 was damaged when a bridge collapsed at Crystal Brook in 1975 and the loco required a lot of new body panels



Broad gauge 843 drifts past the stone goods shed and prepares to halt at Mount Barker platform. This is a fairly typical consist for the Victor Harbour loco hauled passenger trains during the winter months. The photo was taken on 30/7/73.



These two photos of standard gauge 863 and broad gauge 836 show the location and size of the auxiliary reservoir fitted behind the cab.



Right 842 was the first of the class to be painted in ANR colours with the lettering on the hood and nose being prominent. On 7/10/78 it worked the up Victor Harbour train over recently upgraded track at Yantaringa.

afterward. 844 received a prototype air scoop in 10/72 in an attempt to stop exhaust smoke getting into the cabin however the whole lot was removed in 6/77 when 844 was sent via road transport to Nuriootpa to assist in repairs after the Jacobs Creek derailment. 832 has had an extra flap fitted around its exhaust stack since approx. 1970.

In branch line traffic the 830 class have proven very successful. They have not been fitted with staff exchangers or dynamic brakes which makes them of limited use on the main lines. For a while after their introduction the SAR continued with the steam era policy of always having the small engine at the head of a train because it had always set the pace for the more powerful engine. The 830 is geared for the same speed as the other classes it can multiple unit with (930, 700, 600) so on reasonably level tracks it doesn't matter whether the 830 leads or trails.

In practice the 830 will almost always trail because through hills the driver cannot use the dynamic brake fitted in the trailing 930 or 700 so that downhill speeds are much slower which doesn't help the schedule. The load limit on the South Line was reduced from 370

to 250 ton in 1971 to allow the speed of the single 830 hauled train to match that of a 930 with 570 ton. In September 1973 845 was fitted with extra cab soundproofing and ran test trips while leading a 700 class through the hills.

The 830 plays several different roles in SA as it is a branchliner and light passenger engine on the broad gauge, assistant mainliner and yard shunter on the standard gauge yet on the narrow gauge at Port Lincoln and at Peterborough before standardisation it was used in heavy goods service being the only diesel class in use. Quite a versatile locomotive.

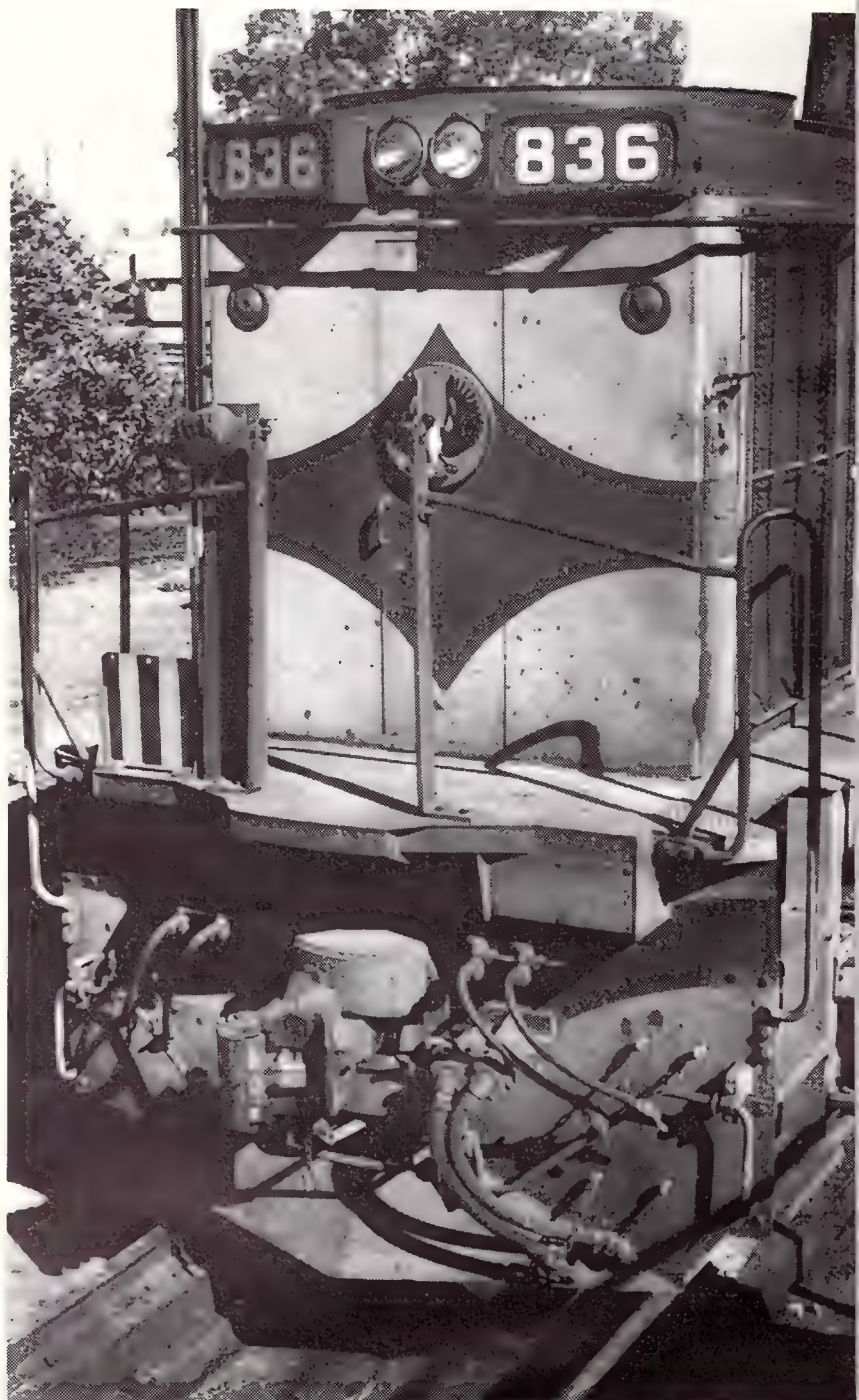
Although painted traffic yellow and brown (mustard pot colours) the 830 has not undergone the paint scheme changes as did the 800 class (AMRM Jan/Feb. 1978). Peterborough based engines appeared to have a richer, more orange version of the yellow than did the broad gauge engines prior to about 1968. The body and cowcatcher area are traction yellow, waistband and roof are brown, chassis is black while the steps, headlight surrounds, roof fan and exhaust stack are all silver. The

cab side numbers and the Vee on each cowcatcher were black but after about 1970 they are usually brown. On the Peterborough locos the coupler mounting which projected beyond the end sill was usually painted black whilst most on the broad gauge were painted to suit the shape of the Vee. Only the broad gauge locos need the route indicator which is mounted on the end sill. 847 - 849 lost their cast piping shrike State emblem when they were sent to NSW. Now all except 830 and 845 have lost theirs after the transfer to ANR. 842 left Islington in June 17, 1978 sporting a very yellow body with the usual brown waistband, etc. The 'ANR in boxes' emblem has been painted in large black letters on both sides of the long hood and the cowcatcher Vee is black. A small ANR in yellow replaces the piping shrike. Recently 859, 862 and 863 have been painted maroon and silver to an ANR design.

Differences from the NSW 48 class are no buffing plates, one high multiple unit cable connector instead of two low mounted, a rotating vent on the roof above the short hood; air horns are mounted further apart than the 48 and the small tank is on a stand on



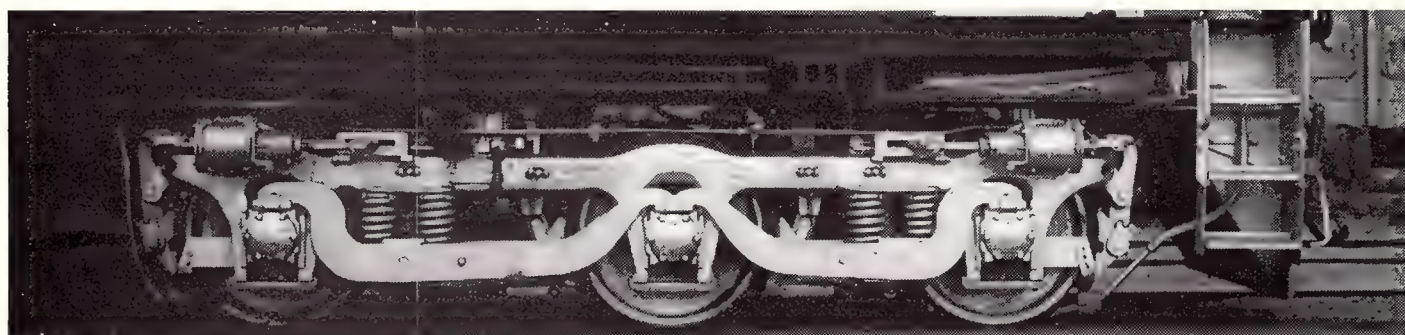
Above The roof detail of 844 glistens in the rain. The deflector plate and air scoop did not prove successful as exhaust fumes still reached the cab when running with the long hood leading. Whenever possible crews will run an 830 with the short hood leading to avoid the fumes.



Right Detail on the B end showing the array of hoses and the location of the piping shrike emblem above the door handle.



These two photos are of the same side of the 834 and show bogie detail including handbrake chain, speedo connection to leading axlebox and sand pipes. Note also filled in exchanger box and lifting plate above the chain.



4870+848 work through Wimbledon on 16/6/75 to give a comparison of the NSW and SA versions of this Alco design. Note the opening in the side sill beneath the cab of 4870 and the buffing plate.



At Bathurst depot on 14/6/75. Note the lack of panels where the staff exchanger cutaway is on the 48 class. The coupler has an extension beneath the knuckle.



The Monarto South to Cambrai line works only during the wheat season. On 7/12/74 841 + 832 haul empties across a bridge near Tepko.

the running plate behind the right hand cab side. Two jacking plates are attached under the side sill on each side to assist with bogie changes, etc. The 48 staff exchanger is in an opening in the side sill below the cab on the left side of the engine. Because the 830 does not have a staff exchanger this opening has been converted into a locker with hinged lid. 847, 848, 849 and possibly 868, 869 and 870 were modified here as the locker is deleted and only the brake lever is below the side sill.

Because of the close similarities to the 48 class and the excellent 48 plan in the Data Sheet series AMRM has not commissioned an 830 class plan.



U 28 to 830 in N Scale

Being a nut on S.A.R. prototype in N scale, and with the availability of suitable locos being what it is, I used the Terry Clark method of getting what I wanted. That is, take the most suitable chassis available, junk the parts you don't need, and proceed to hack the remainder up into something more suitable to your needs. For this loco I used the Minitrix No. 2019.

The first task is to remove the motor from the chassis. This is easy, but then comes the hard part, plucking up enough courage to shorten the chassis by cutting it up. There are two cuts involved, as shown in fig. 1. They are made at AA and BB, the shaded portion being removed. It is essential that the cuts are perfectly straight and square, otherwise the chassis will not join properly when it is glued back together. I used Araldite to rejoin the halves, by applying a thin coat to each half and then pressing them firmly together, to squeeze out any excess. Just to make sure I had electrical continuity between the two halves I placed a spot of solder in the recess at the cut line.

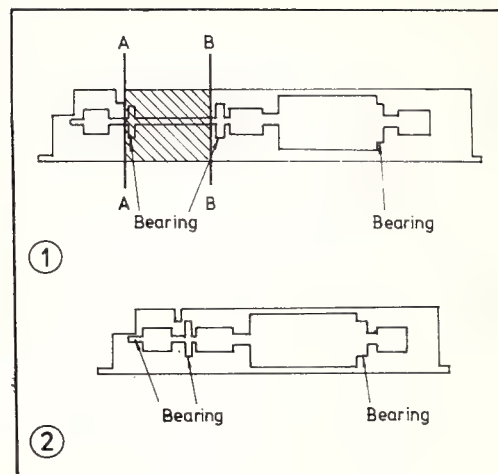
The next step is to shorten the drive shaft. This is done by removing the universal joint on the long shaft and cutting away the unwanted part and then gluing back the joint.

There are now two bearing mounts and three bearings; however by taking one of the bearings and filing it flat on two sides, it will fit on the extreme end of the shaft, beyond the worm drive. (fig. 2)

Having got all the necessary alterations done, the next step is to get the mechanism going again. With a bit of "fiddling" it soon burst into life and behaved quite well, considering what it had been through. Once I had the motor operational I set about replacing the bogies. The contact arms are now too long for the wiper plate and also will foul each other, so a small S bend in each fixed that problem. Since the original wiper plate is now too long I discarded it and used in its place a piece of P.C. board.

With the mechanism in action I ran it in while I was building the body.

The body was built from styrene and assorted bits and pieces as required;



however I shied away from building the horns from pins; soldering is not one of my strong points, so I made them from blocks of styrene filed roughly to shape. One day I will have a go at them. 830s have two sets of three unit horns, one on each side of the cab roof.

The colour scheme on all 830s was orange with a Maroon waist band flared to a diamond on each end, with a Maroon roof, Black running boards and silver steps and bogies. The paints I used were Foquil Reefer Orange and Maroon and Humbrol Silver and Flat Black. Numbering was done in either white or Indian Ink and the Piping Shrike on a yellow background was added at each end, in the centre of the diamond.

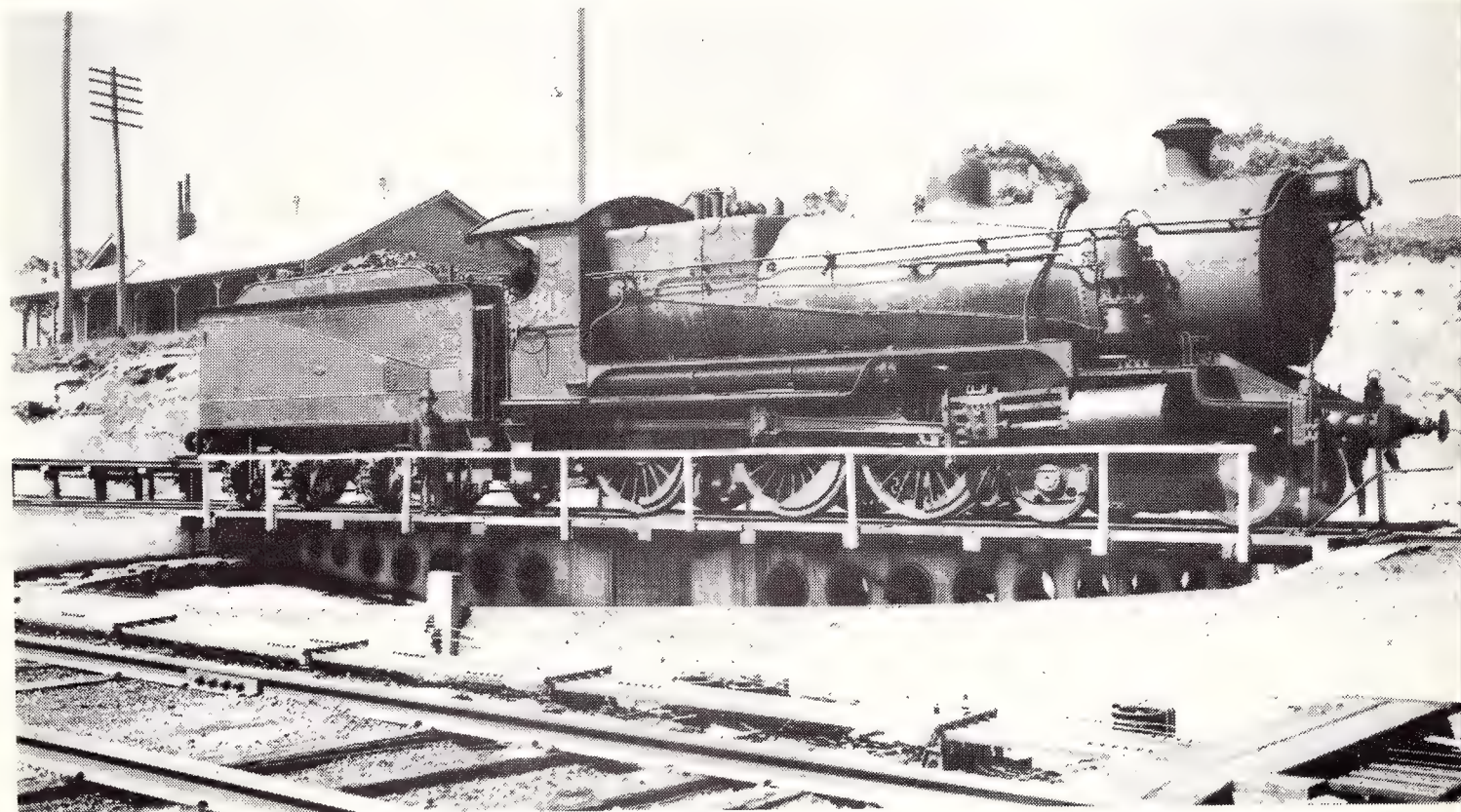
Finishing touches were added in the form of fuse wire for the hand rails and Kadee couplers in place of the Rapido type originals.

This completed a fairly difficult but satisfying modelling project, which can be applied equally to the NSW 48 and Silverton Transport Nos. 28 and 29. A similar method is also used for the SAR 600 and NSW 45.

A.D. Presgrave

N.S.W.G.R. Turntables. Continued from page 24

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3513, in original condition, on the 60ft. cast iron turntable at Mount Victoria in September 1935. This turntable was later replaced by a 75ft. table to accommodate C36 class locos. (Photo by J.L. Buckland).



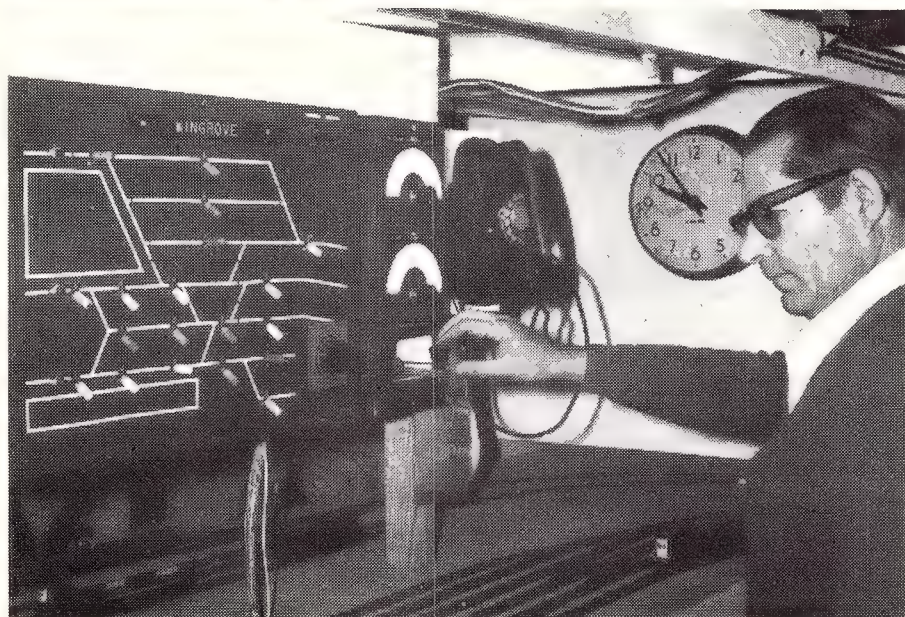
Jack McLean, our genial host,
stokes the Birthday Cake.

WINGROVE LINE'S 25th BIRTHDAY PARTY

Ian Weickhardt.

Photographs —

Keith Buckland.



One day whilst I was at my office bending my energies to the benefit of Telecom, the phone rang. The voice at the other end asked if I'd like to come to a 25th Birthday Party for a model railway. Seeing that the voice was that of Jack McLean, owner and operator of the "Wingrove Line", I couldn't help but accept. Besides that, it is only five miles across to Jack's from my place, and Jack is such a gregarious and helpful bloke that its hard to knock him back.

So Saturday 14th July 1979 dawned bright and promising. Keith Buckland (who produced the photos for this article) and I arrived at the Wingrove Line, in Jack's garage (?) in Box Hill at about 11.30 a.m., and joined in the first session of an all-day birthday party. A special timetable (generously proportioned to accommodate operating errors) was being run, and shortly after this running session concluded, a birthday cake appeared! Consumption of said cake wrecked the next timetable run. I wonder how many people have seen a bunch of grown men, plus some women and children, gather around a model railway and sing 'Happy Birthday' to it? Well, this group — all stone cold sober and consisting partly of men at the peaks of their respective professions — did just that, whereupon our host burst into near-hysterical cackles, and asked if it really was true that we were all mad. Well, I'd raised that question with my wife Wilma before I went over to the party. She actually bristled at the idea that we were all barmy, and quoted as an example one of my work colleagues who has a duodenal ulcer. "He", she stated emphatically, "does not relax at home as thoroughly as you, darling. Remember, you don't have an ulcer." Allowing for a certain amount of affectionate wifely bias, there is still a message in what she said. Jack felt much better when informed of Wilma's opinion.

What keeps this system alive and enjoyable?

Perhaps you can glean some reasons out of this account of the history and the philosophy of the Wingrove Line. It started as an HO layout (the Wingrove Harbor Board, Railway Station) with a simple operating timetable, in the roof of the McLean home. The first timetable, still in existence, was handwritten on a piece of note paper. Later editions have been typed. The necessary 'train graphs', for planning out the running and train crossing schedules over the single-line main line, were sketched out pages from old ledger books

Centre Some of the motive power available for the birthday runs.

Left Wingrove station 'Signal Box' during one of the running sessions.

and on used computer paper. Incidentally, preparing train graphs is quite a fascinating exercise for any modeller who is even mildly interested in 'operation' as compared with modelling.

As the years went by, the layout was moved to the garage, and the "train operation" interest actively pursued. 'Block Instruments' for communication between the 'signal boxes' were built up, ruggedly at first, but by 1979 very nicely executed indeed. The signal boxes are at stations named 'Wingrove', 'Mason Street', 'Koongarra Creek' and 'Golborne Junction'. The loco depot is at 'Jacksonville'. The fact that the signal boxes are all within a few metres of each other doesn't really matter.

In order to run a "day's timetable" in an afternoon or evening, the Wingrove Line uses 'hot clocks'. These are run faster than normal to achieve the desired 'shortening' of time. When operating a model system with only about forty metres of main line, half-hour intervals (for example) 'between trains are unreal in 'normal line'. There is a 'rightness' on the Wingrove line about a half hour on the timetable that is considerably less in real time. The Wingrove clock system too, has evolved. From a large clock in one corner, within the view of all operators, it has been developed to a group of suitably situated IBM 'master and slaves' clocks of varying age, all keeping absolutely synchro-nised time.

Jack and the various operating groups that have come and gone, through a complete generation, have had the immense satisfaction of a lot of operation over the years. The system, to many modellers, is comparatively stark. The track is not ballasted, and scenery is pretty scarce. But, as Jack says, "the railway ends at the fences". You can't help but feel that his system has been developed only as far as it needs to be, as a source of enjoyment. It has not become a frustrating taskmaster demanding that it be developed continually 'to keep up with other modellers'.

The Wingrove Line rolling stock is a pretty mixed bunch. Hornby-Dublo and various other makes are there side by side, some American, some English and some Australian. The locomotives are mostly painted to project the Wingrove Line "corporate image"; the Triang B's and Bachmann F3's are painted black, with red, white and yellow trim. A "W" on the front identifies them as Wingrove units.

One of the strengths of the Wingrove Line as a source of continuing enjoyment is the fact that operation has not been pushed on continuously. There have been breaks, sometimes a year or more in length, where little has happened. At times, there have been upheavals caused by large-scale reconstruction of benchwork and the layout itself, and more recently extension of the layout. Much of the time spent on the layout itself has been a profitable investment, as the train operation is particularly smooth and trouble-free. Which, I regret to say, is more than can be said for my own 'scale model railway' system.

A good deal of the Wingrove 'atmosphere' is contributed by the non-model material around the garage. For example, one large blue-and-white sign proclaims this location to be "115 Miles from Griffiths Bros. Tea". Rows of cartons, neatly grouped around the shelves, contain books and papers concerning 'real' railways. Working Time Tables are perhaps the most numerous books. There are examples from all over the world. Apparently there is something satisfying about knowing the schedules for mixed trains in western Africa, and of drag freights across Arizona.

Continued on page 34



Concentration at Mason Street. This panel exchanges bell signals with 3 other locations.



One of the several boys and girls who came to the party. He is framed between what signalling enthusiasts will recognise as a pair of MINIATURE "miniature electric staff" machines. They were 'visitors' to the layout for its birthday.



Memorabilia and other oddities, including an AMRM reporter. Miscellaneous notices and fittings — obtained honestly — add atmosphere to a railway room.



SCENIC ROUTE

To celebrate 100 issues, SCENIC ROUTE, this issue goes colour.

Above: On Kevin Loughead's Moping Branch Railway, Murray Billett photographed Alco 839 hauling a C class cattle van, DS class van and wooden brake van. The train is passing beneath the bluff overlooking the long bridge near Taggarts Hill, as shown in the Nov/Dec 1978 issue of AMRM.

Above Right: The station scene at MENANGLE, the exhibition layout built by Model Workshops. All structures are scratch built from Northeastern timber and styrene sheet. Allan Brown took the photograph.

Right: 1210, a conversion from a Prototype Z19 kit by Es Davies, heads a tourist special into MENANGLE station. All fencing was scratchbuilt and the wire used in the fence in the foreground is strands of electrical flexible cable. Allan Brown photograph.

Far Right: Allan Brown took the photograph on Ray Pilgram's 'BYLONG' layout. Ray's wife Chris, built the scenery which reflects the fine lines of the Z27 class, which was scratchbuilt by Ray, using a C32 class tender.





PHOTOGRAPHICALLY SPEAKING

between 1,000th to (in some cases), a long 8 seconds. This latter facility is invaluable when shooting night studies — or for photographing model railway layouts. Obviously when utilising these slow speeds, a tripod is necessary.

It must also be remembered that all electronic cameras have a manual over-ride which reverts the instruments to a conventional match-needle unit.

With the camera selected, team this with a fast (f.2.8) 135mm medium tele lens and a 35mm wide angle (with an aperture around f.2), most outdoor pictures will be possible — and reasonably economically.

Some operators will need greater focal length lenses (although I personally feel that for the use they get, the money can be better spent on perhaps an additional camera body). However, for these photographers, again quality is the catch-cry, and should 300mm or 500mm lenses be part of your scene, perhaps if the 35mm is deleted from the shopping list and the 'saved' cash be put toward a better long lens, all the better.

Operators must remember however, that in railway photography, the long lens has only limited use, the pitfalls being obvious. For instance, expecting decent pictures (except for those done for effect) with much over 200mm in summer down hot railway lines, concrete platforms or bridges, terrific heat haze will have to be penetrated. Their only real role is penetrating 'hard to get into' areas like steel-works (again a haze problem) or across paddocks for delightful side-on pictures. In this latter application, perhaps the best for long lenses, little distortion of the subject will be evident, unlike the more oblique shot which will provide ugly unnatural bunching more often than not.

Whilst this article has so far discussed popular 35mm cameras, some photographers are turning to larger format machines hoping to obtain that 'little bit extra' in edge sharpness when needing big blow-ups — or fine detail colour publication

Continued from page 19

material.

Discounting their much higher price and operating expenses, some of these cameras are excellent for railway photography, although far too many brands only provide for a 500th speed (not fast enough) and due to their natural longer standard lenses, they can provide some headaches in the depth of field department, particularly in bad lighting.

Apart from looking at the slowness of operation of some large format cameras, another thing to look at is format size. More often than not a 2¼ x 2¼" format will provide considerable waste. It might pay to look at one of the 16 frames to the '120' film (rather than 12 frames with a 2¼ x 2¼) cameras when considering 'big-bear'. However this point depends on the photographer's individual style and use for the results.

Extra camera

Some rail photographers in fact operate a number of cameras, one loaded with colour and the other black and white. Others may use two cameras other ways such as equipping one with a standard 50 or 55mm lens and the other with a medium tele. The combinations and uses (and reasons) can be endless to some extent, but the important thing to remember if this is your scene, use similar brand-name equipment at all times. In other words, standardise on one camera system for nothing is worse than (in fast action situations) being forced to fiddle with aperture controls on one lens type which travel from right to left and to set another lens with controls operating from a different position on the lens barrel and in the opposite direction to the former. Even focus rings rotate in various directions. By the time the gear is 'set', the picture has again gone.

Thus the message is obvious. Standardise on one brand of gear, even if for economy reasons one has to purchase second hand lenses. Generally speaking, if a lens looks clean, does not rattle, has no evidence of

water having been in it and the aperture controls move perfectly, little else can really go wrong, providing it has not been dropped and the lens elements are out of true. Anyway, run a quick test before buying by shooting a picture or two down the street outside the camera shop. After looking at the results you will have your answer.

Summary

To sum up, photographic gear for railway pictures MUST be easy to operate, must be standardised and good enough for the need the photographer has of the results. Additionally, the quality of the lens within the enlarger photographic prints will be made from — or the projector the slides will be shown from MUST also compliment the camera equipment.

I realise full-well that this short paper has only really scratched the surface of this subject and any reader with more detailed questions regarding this text can direct them to this column. Readers will have already noticed that brand-names have not been appearing in the above story through intention. However, one final point I would like to make to any reader about to purchase camera equipment, find out first from an independent repair firm the availability of parts, and the price of them. One person I know purchased a new popular brand 35mm SLR last year for business purposes at a tax-reduced price \$195, only to pay \$102 for a repair bill (shutter and meter) 14 months later. Since the camera does not do much work and was not abused, I don't think this is good enough from a camera. By contrast, I purchased an electric-shutter machine in 1975 (a leading brand-name), have thrashed the daylights out of the thing in dust, rain and what have you and its first workshop attention was early in 1979 after it had been involved in an extremely serious accident. Then all it required was meter re-calibration, a general clean-out and the bill??? Just \$42! (And the camera works better then ever!)

NSWR TURNTABLES

Continued from page 24

Goulburn) and later between Enfield and Cootamundra. At both Cootamundra and Moss Vale the D57 class locos were turned on triangles. With the completion of the duplication of the track between Cootamundra and Junee, and the opening of the new Junee loco depot (with the 100ft. turntable), the D57 class were allowed to operate to Junee. The later D58 class was limited to the same routes during its short career.

105ft. turntable

These were installed for the use of the AD60 class 4-8-4 + 4-8-4 Beyer Garratt locomotives which started to enter service in 1952. The 105ft. tables, like the 90ft. tables, were of steel construction, were twin span and electrically operated. Only three were installed and, as mentioned earlier, the AD60 class was often turned on triangles at country junctions, while the modified dual control version did not require turning. The 105ft. turntable that was at Enfield is to be installed at the N.S.W. Rail Transport Museum at Thirlmere.

Apart from the basic purpose of turning locomotives turntables were required at depots that had roundhouses, to enable the locomotives to enter and leave their stalls.

Turntable Pits

In the case of the 105ft., 90ft. and 75ft. turntables, and some of the 60ft. and 50ft. turntables, the pit was fully lined with

concrete, and a concrete (or occasionally brick) wall ran right around the pit. In these cases the turntable pit was usually completely sunken into the ground so that the approach track was level. With some of the 60ft. and 50ft. turntables, however, the pit was only a shallow saucer shaped depression in the ground, not lined with concrete. The wall was only present as abutments at the two ends of the table (when it was lined up with the approach track.) In these cases the approach track usually rose above ground level to reduce the need for excavation of an extensive pit. The floor of the pit in these cases was usually covered with grass and

WINGROVE LINE

Continued from page 31

Back to the Party

Besides humans, other items came to the Wingrove party. One visitor brought with him beautiful (working) scale models of a signal-box lever frame including interlocking, and also miniature electric staff machines. These were made by a now-defunct British signalling equipment manufacturer. They nearly "stole the show" when displayed at the party.

It was a lady visitor who perhaps unwittingly put a seal of approval on proceedings later that day. She was told of various stunned reactions to the thought of a model railway being given a 25th birthday party. Her comment was as follows: "That's fair enough. My son and daughter were driving home from town recently, and the car

weeds. Turntables such as this are rarely seen in model form, but they were the usual thing at country branch line termini, and other small country locations.

As mentioned earlier in this article, scale drawings and more photographs of the various sized turntables will appear in future issues of "A.M.R.M." to assist the modeller to produce a realistic model.

Acknowledgements.

P.T.C. of N.S.W.

Mr. J.H. Forsyth

Mr. J.L. Buckland

Mr. C.H. Pratten

odometer ticked up 50,000 miles. They stopped the car right there, hopped out, and sang "For she's a jolly good lassie" to it."

Want to know more about the Wingrove Line? You'll need to go back into the AMRM early issues but it will be worth it because of Jack's ability to make timetables appear interesting:—

The railmotor is unavailable tonight

Jan/Feb. 1967

The rebuilding of Wingrove Station — 1

Mar/Apr. 1967

The rebuilding of Wingrove Station — 2

May/Jun. 1967

A quiet night at Wingrove

May/Jun. 1968

Golborne Junction

July/Aug. 1968

Where is Wingrove — 1

May/Jun. 1972

Where is Wingrove — 2

July/Aug. 1972

SCRATCHBUILDING V.R. GY WAGONS

A scratchbuilding project for both beginners and old hands.

By Peter Gibbs

The Victorian Railways GY all purpose open wagon is an ideal scratchbuilding project especially for those with only meagre experience in constructing model railway rolling stock in either metal or plastic.

The construction details deliberately go into some length at each phase to assist the beginners or less experienced in this hobby. Yet it is detailed enough I believe, even for those who have had considerable experience in craft modelling in a variety of materials, but have not attempted modelling this particular piece of rolling stock.

The finished product is a well turned out little model with good operating characteristics which all but the most rabid nitpickers would find acceptable on their layout.

GY wagons look especially effective when run in multiples and completed to prototypical colours with tarpaulins fitted.

OK, let's get on with it.

YOU WILL NEED..... the following components:-

1. Polystyrene (plasticard) sheeting in .010", .020" and .030" thickness.
2. Assorted Slaters plasticard microstrip.
3. Plastruct T beam 3mm high. (HO scale 1"). One piece will do 2 wagons.
4. Plastruct T beam 1.5mm high (HO scale 6"). One piece will do 5 wagons.
5. PMH side frame and wheel sets (one per wagon).
6. MGW 10mm solid centre steel wheel sets — optional. (Two axles per wagon).
7. MGW brass axle bearings (four per wagon).
8. Lead weights — 2oz per wagon.
9. Two Kadee couplers No. 5. (per wagon).
10. Brass wire — .020" diameter.
11. Plastic cement (preferably Testors Cement for clean neat joins).
12. 5 minute Araldite, Super Glue, and P.V.A. glue.
13. Brass ladder strips 1' wide and rungs 1ft. apart.

Tools: Walther's HO scale ruler, steel or aluminium scribing ruler, modeling knife or scalpel, small brush, modelling or jewellers files, fine grade sandpaper, Exacto fine toothed saw, pin vice, tweezers, 5/64" and No. 74 drill bits, a cutting board.

All measurements are in HO scale feet and inches unless otherwise specified.

STEP BY STEP CONSTRUCTION

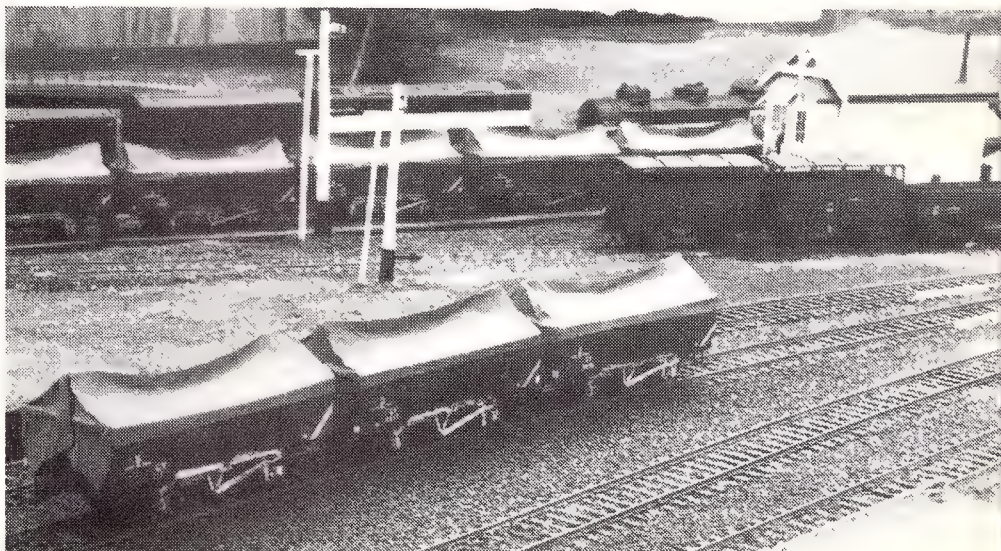
Step 1.

Separate side hangers from wheel set frames carefully using the fine toothed saw. Ream out axle holes with 5/64" drill bit attached to pin vice, being careful not to force right through the axle boxes. Fit brass axle bearings into side hangers.

Step 2. The Body

Place sheet of .030" plasticard onto your cutting board. Starting with the best square edge, mark out, with a very sharp pencil and the scale rule, the sides and floors of the wagons using the drawing on these pages as a guide.

First mark out a row of floors 22' x 9", then sides, 22' x 4'6" and finally the ends, 9'3" x 5'6". (Note: extra 3" width is for overlapping



Aluminium tarpaulined GY's on Graham Brown's Woodend layout.

of sides. Extra depth in ends is required and will be explained later on.)

Step 3.

With the sharp scalpel or modeling knife and steel rule carefully score all vertical lines once only with firm even pressure. Set work so that knife is drawn towards your body at a comfortable angle from top left hand to bottom right. Left handers please reverse procedure.

After scoring all vertical lines turn work on board and repeat for all horizontal lines. Separate panels by bending along score lines away from cut marks. Remove bottom corners of each end piece by measuring 6 scale inches vertically and horizontally from both corners and with a knife nip off each corner at 45 degrees.

Step 4.

Cement sides and ends to side edges of floor using Plastruct cement or similar. Doing one surface at a time quickly wipe a cement laden brush along the edge of the floor and the side or end to be affixed. Press together. Capillary action of the cement should "weld" immediately. If you are not satisfied the join has been solid, wipe brush along inside corner of join.

Note that the deeper wagon ends drop below the level of the floor by a scale foot leaving the tops of the sides and ends flush. Repeat with other sides ensuring that the whole structure is straight and at right angles. Set aside to dry thoroughly.

Step 5. The Doors.

One of the most distinctive features of the VR GY wagon is the unusual embossed X on

each door. To make the model wagons look realistic they too should have the embossed X's. Easier said than done you say. Well here is a method that is simple and effective.

Take a sheet of .010" styrene and rule up 4'6" x 4'6" squares for as many doors as you require (four per wagon). Then draw two horizontal lines across each square nine scale inches from top and bottom, thus leaving three scale feet between the lines. Carefully score out the 4'6" squares and separate.

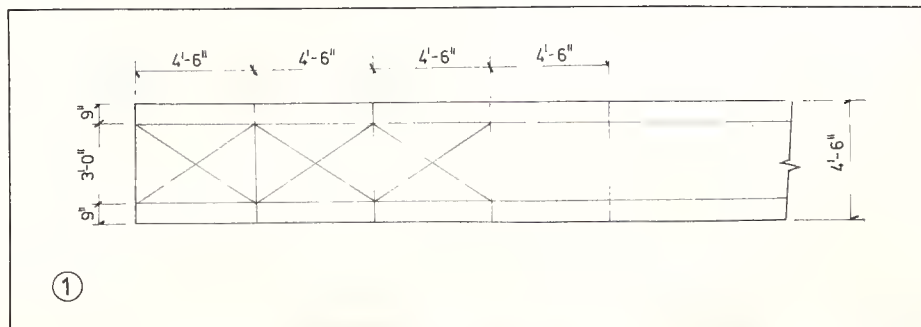
Next place a ruler or steel edge diagonally over each door until the ruler intersects the inner ruled lines at the edges of each square. Bend the plastic back over the ruler edge, thus achieving a diagonal crease line.

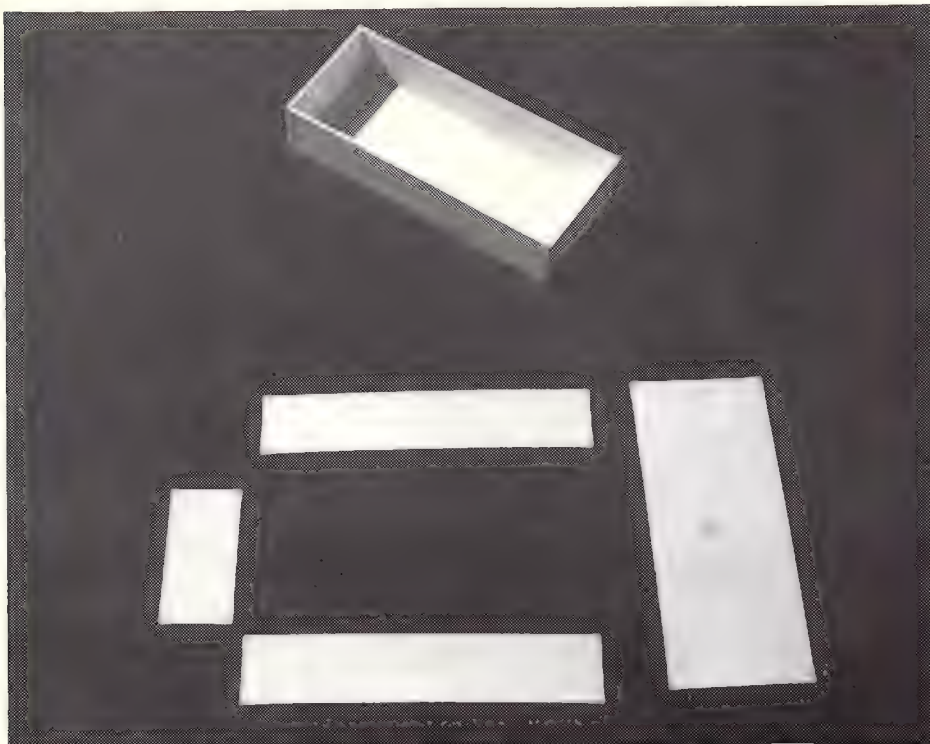
Twist door in semi circle until other edges of ruled lines appear and repeat creasing. Remove ruler and repeat creasing once more with the fingers until a definite, permanent crease in the shape of an X is obtained. See figure 1. A look at the scale drawings will answer your query as to why the creases do not go right to the corners of the doors — the X's are only three scale feet deep and are marked at their extremities by the hinges and door fasteners.

Step 6. The Detail

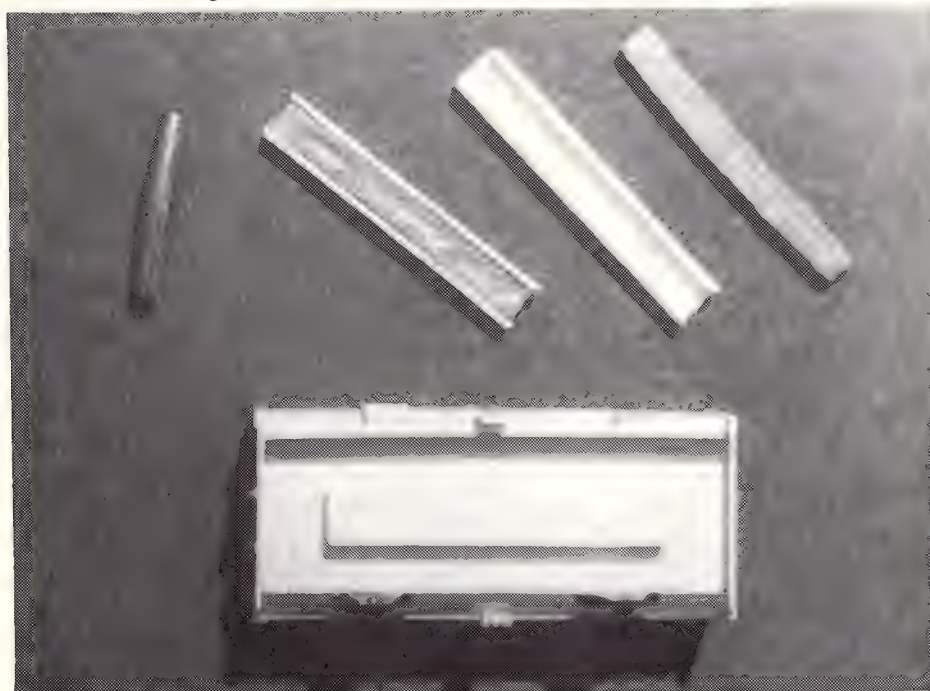
Returning to your wagon shell, lightly file and sand down all joints to ensure they are flush and smooth. Measure and pencil in a line down the centre of the wagon underside from end to end. Measure the centre of each wagon side and draw a vertical line down that centre.

Cut eight pieces of .020" Slaters plasticard

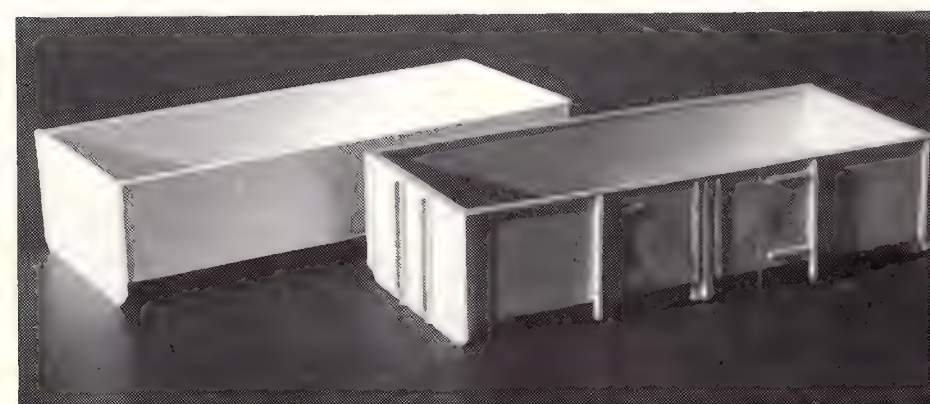




Scratchbuilding can be as easy as assembling four sides and a base to form the body of a GY four wheel wagon.



Lead sinkers, refashioned into a handy rectangular shape, and placed in a styrene weight box give each wagon the correct weight for realistic operation. The weight box is made long enough to fit snugly between Kadее couplers at each end.



The detailed and the unadorned. From the plain rectangular box on the left, detailing the superstructure by styrene microstrip renders the quite realistic wagon on the right. Note the faint embossed "X" on the doors.

microstrip 5 scale feet long for corner braces. Cement to each other on each corner of wagon as illustrated. Strips cemented to END pieces must be fitted flush to the top edge of 45 degree angle. (Look at end photo near step). Strips cemented to the SIDES should be angle cut so that the outer edge is flush with the bottom of the END strip just installed and the inner edge is angled up to meet the bottom of the side.

Step 7.

Mark up and cut out centre door sills measuring 1'3" x 9" deep from .030" styrene. Take two door sills and adhere the longer edge to underside of each side directly underneath and bisected by your previously drawn vertical centre line.

The door latching rod detail is provided by three pieces of strip to each side. The thicker six scale inch microstrip (5'3" long) is laid down the centre line and flush with the top of the side and the bottom of the centre sill. Two pieces of three scale inch microstrip 2'9" long are laid edgewise on either side of the centre strip just far enough apart so they are vertically in line with the outer edges of the door sill, and 9" down from the top edge of the side.

Step 8.

Next, determine the exact centre of each door area on both sides; i.e. 2'3" out from the latch rod detail and 2'3" down from the top of the side.

Snip out little squares approximately 1' x 1' from .020" sheet, and adhere one to the centre of each door just marked. Now take one of the previously prepared doors, wipe the under surface completely with cement (but don't over cement) and carefully press onto wagon side flush with the latching rod detail strip. The centre of the X should be over the little square of .020" sheet ensuring that the X centre stands out slightly proud. Hold down with fingers until door is firmly adhered to side. Repeat procedure with other door.

Select two pieces of .020" strip 6" wide by 5'3" long and cement each EDGEWISE to the wagon side right up against the outer edge of each door. Where the door side frames you have just affixed meet the outer edges of each door X is the position to glue the precut 2' long door hinges using the same 3" microstrip size as the latching rod detail. Nine inch long latches (4) are also glued to top and bottom of latch rods, butting the central, vertical rod and slightly overlapping each door.

Step 9

Measure the exact length of each completed side, and note. From .020" strip 6" wide cut to the length of the completed side and cement same, flat, to the top of each side. Representing the coaming all around the top edges of the wagon, the strip must overlap the outer edge of the sides sufficiently to cover the tops of the door side frames and the latching rod detail, and be flush with the inside edges of the sides X. Now measure the tops of the ends and repeat procedure.

Step 10. End braces and optional detail

Measure and cut off four lengths of Plastruct T beam 5'6". These become vertical end braces two of which are cemented to each end three feet apart and three feet in from each side. Once the cement has dried carefully angle cut the bottom of each brace starting 6" up from the bottom, and angling down to the bottom edge. See accompanying photo of prototype for illustration.

If you wish to add an extra little detail to your GY wagons use pin heads to represent the inside lashing points. These show up on the outside of the wagons as 'pimple' like circular nobs right beside the door frames and end braces, approximately 1/3 up from the bottom. Cut the pin head from the shaft leaving about 1mm left to insert through the

wagon side and ends. Drill appropriately sized hole and glue pin head into position with Superglue, Voila!

Step 11. Underside Detail.

From your sheet of .030" styrene mark out two pieces 15' x 1' and one piece 15' x 2' for assembly into a weight box. Score along lines, separate and glue up into U shaped box 15' long by 2' wide by 1' deep.

Refashion your lead sinker purchases (No. 1 cylindrical sinkers) into rectangles slightly less in size than the weight box dimensions. I found that the old fashioned hammer and anvil (or concrete path) trick was most effective in getting the shape and dimensions I wanted.

Fit weight into upturned weightbox and glue to underside of wagon using the previously drawn centreline as your guide to centring. Box should be equidistant from each end of the wagon, leaving a space 3'6" on either side.

Step 12. Fitting Kadee couplers

Cut out two pieces of .030" styrene 3'6" long by 2' wide. Cement into spaces between the weight boxes and wagon ends, thus creating a base for the fitting of the Kadee couplers. The bottom piece of a Kadee No. 5 coupler pocket should fit snugly on top of the base. Now cut out a recess in the bottom of the wagon end so that the raised lip of the coupler pocket slips over the end neatly and allows the pocket to fit flush with the underside of the wagon.

Complete assembly of couplers. You should find later that the couplers are already at the correct operating height for smooth operation. Check with a Kadee coupler height gauge. If needed add or remove material from the coupler base to obtain the correct height. If you wish to fit some other type of coupler you will have to work out a suitable mounting and attach it yourself.

I have not attempted to include the underbody brake gear as it is complex and time consuming. However, for those that wish to further detail their wagons with brake gear, then Phil Curnow's article on Four Wheel Wagon Brake Gear in the Sept. Oct. 1977 issue (No. 86) of AMRM is an ideal reference.

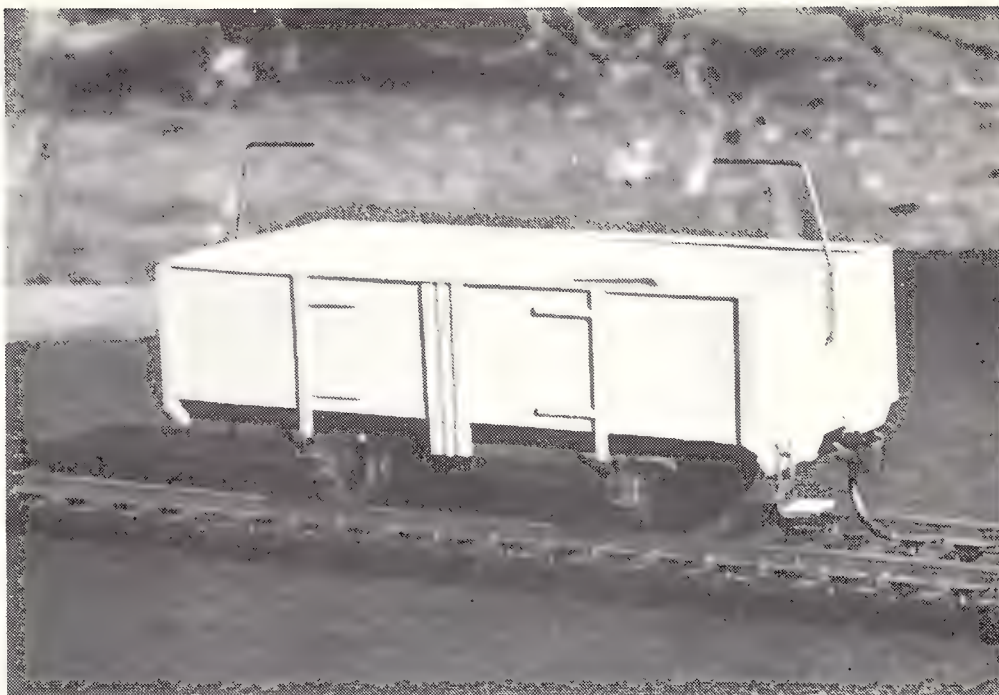
Step 13. Chassis Rails and Wheels

Turn wagon upside down again and measure inside distance between wagon ends. Cut two pieces of Plastruct I beam to that length. Cement beams along wagon bottom seven feet apart, (measured from the inside of one chassis rail to the other), and equidistant from each side, which should be 6". If there is any discrepancy ensure the accuracy of the width between the chassis rails as this will affect the installation of your wheel sets.

Note: Stop at this point and consider your painting program. If your wagons are to be yellow gold in color then begin painting now as all of the construction to date will be covered in that color. The side hangers we are about to affix are always ferric red. If, on the other hand, the whole wagon is to be ferric red continue construction, especially if you are to paint by brush. If spray painting it is advisable to paint now rather than have overspray all over the wheel sets when the side hangers are attached.

Position one of the side frames on top of a chassis rail so that the axle box is 5'3" from one end. Mark position of side frame on rail for guidance when gluing. Repeat with other three side frames. To double check measure distance between two axle boxes on the same side. The wheelbase should be 11'6".

Using a 5 minute epoxy glue such as Araldite, affix side frames to the chassis rails, doing one side at a time. Hold the side frames upright until the adhesive has set sufficiently for them to stand by themselves. Repeat with the opposite side, dropping preferred wheel



A completed wagon with tarpaulin support poles in upright position and shunters steps and coupler fitted.



End view clearly shows end brace detail, shunters steps (painted ferric red), and the white square denoting hand brake. The tarpaulin is almost brand new, dark olive green in colour with black VR stencils at each corner.



An early GY wagon without tarpaulin gives good reference detail of doors and top coaming.

sets into the axle boxes, and hold lightly until adhesive has set. Ensure that axles are parallel and true and rotate freely in the axle box bearings.

Step 14. Shunters Step

Prepare two shunters steps from the 1' brass ladder material. Snip off a 3' section of ladder and with a set of long nosed pliers bend over a 1' section at 90degrees to the rest. Snip off the rung at the top of the vertical section (if there was one) leaving about 6" of ladder rails before the next rung down. See pictures for clarification. Adhere with Superglue to centre of left hand panel of both wagon ends and so the horizontal plate is 18" below bottom of wagon. The steps are on diagonally opposite corners. To complete stand cut out 1' square of .010" styrene and adhere to ladder rails forming horizontal step.

Step 15. Tarpaulin support poles

Another of the distinctive features of VR four wheel open wagons is the ever present tarpaulin. At any given sighting of a train of GY wagons a majority will have tarpaulins fitted to protect the wide variety of goods carried. As with the wagons themselves, the tarps come in a variety of colours and shades, ranging from yellow and olive green when new to much lighter, weathered, shades right through to light tan, or sand and a light grey green, not unlike a pale avocado colour.

The tarpaulins are supported by two poles at each end of the wagon which are locked into a vertical position when the covers are in use. When not required they lay over resting against the wagon side.

Our poles are made from .020" brass wire. Cut two lengths 10 scale feet long, then with needle nosed pliers bend the wire at right angles one foot (1') from one end. Measure a further 5' along and bend a further right angle so that you now have a U shape with unequal sides.

Drill a clearance hole with a No. 74 drill in the centre of each wagon end 2ft. down from the top. Insert small end of wire U into clearance hole and hold vertical while placing a small dab of Superglue on the inside of clearance hole.

Painting

As explained earlier, both the GY wagon and its tarpaulin come in several colors and a wide variety of weathered shades. The wagons when new or after a refurbish were painted ferric red all over but are now ferric red chassis and golden yellow superstructure. Serial numbers, capacities etc are printed in either white or black respectively. To show that the wagon was grain proofed a yellow stripe on diagonal corners was added to the red body. Nowadays the stripe has grown to cover all of the body. A white square edged with black is painted on the side and end nearest the handbrake.

If making a multiple string of GY wagons it is a good idea to use both colour schemes to more closely approach prototypical practice. By late 1979 all of the ferric red GY wagons have been painted yellow.

Both Floquil and Humbrol make suitable colours. I use Floquil Boxcar Red and Humbrol Matt Yellow. Both gave an excellent finish when sprayed. Suitable GY decals sold under the M & J brand are available from most hobby shops.

Remember when painting yellow wagons that all superstructure including the chassis rails are sprayed yellow, while axle boxes, axles, couplers, brake gear etc are painted red. (Brush is easier). In some prototypes I have even seen the shunters steps painted red below the level of the chassis rails and yellow above.

After the base coats have been applied and are dry brush on with squares about 1 foot square at one edge. Allow to dry and then



Underbody detail including brake gear ground throw lever.



Side view of prototype GY wagon Note position of serial numbers, carrying capacities etc



A GY in its natural surrounds unloading wheat via a screw conveyor at a flour mill/wheat silo complex at St. Arnaud, Vic.

edge in black with a medium point black felt pen. For painting the tarpaulins I found the range of Humbrol military paints most appropriate. You can pick from drab olive, light green, grey and sand, dark earth and foliage green. Add white or light grey for a washed out look.

Conclusion

By this method it is possible to make a large number of open wagons for a relatively modest outlay, while acquiring modelling skills (if not already acquired) to tackle more challenging tasks.

TARPAULINS

There are several methods for making tarpaulins for GY wagons and other items of railway rolling stock that require a flexible, removable covering. One method uses aluminium cooking foil, and the other uses facial tissues soaked in a PVA glue/water mixture.

The aluminium method owes much refinement to Victorian modeller Graham Brown whose magnificent VR Woodend layout is enhanced by long strings of GY wagons with aluminium tarps fitted, and painted a variety of faded colours. Take a sheet of cooking foil and gently rub out all embossing with your fingers, or a smooth cylindrical shape such as the metal handle of a modelling knife. Measure out a rectangle 110mm x 56mm (16 x 30 scale feet) and cut. Fold down lengthways and form a sharp a crease down the middle. Rest the crease on top of tarp poles ensuring foil overlap is equal at both ends. Smooth foil down over sides. Now grip both sides at one end with thumb and forefinger. Push creased peak down over end, and fold the resultant flaps at each side around wagon end to lock foil in place. Repeat with other end. You will now have two inverted peaks pointing down each end. Don't worry, this is often prototypical on some poorly tied tarpaulins. Now gently pinch down the crease line and rub a dip or depression in the middle of the wagon. Once satisfied with the shape you can paint with full strength Humbrol enamel. See Painting section for further details.

Although messier the tissue/PVA glue method can look very realistic, and is the method I used myself. One standard sized facial tissue folded over lengthways gives the right thickness and is long enough to make at least three tarps.

Cut out a piece of tissue to the above dimensions (eg 16' x 30'). Drape over completed wagon and test for correct length and width. You should allow about 18" drop on each side and about 5' at each end for folding over.

Dip tissue in a solution of one part PVA glue to four parts water. Let the tissue soak briefly, lift out and drain off excess liquid.

Drape over wagon once more, smoothing down over sides, and ensuring equal amount of tissue overhangs each end. Fold ends of tissue around each end and overlap as per prototype photo. If the folds look too bulky, flatten out again and cut shallow vee in the centre of each end before refolding.

Ensure the tissue rests naturally over the poles and dips slightly in the middle. Set aside to dry. When dry the tarpaulin will be stiff and hold its shape easily. Trim any ragged edges with scissors.

Cut wooden former to same size as wagon for painting horse. Place tarp on horse and paint desired colour in Humbrol enamel diluted three parts solvent to one part paint. Apply with brush.

Peter Gibbs.

Above

Line of GY's in Ballarat siding show variety of tarpaulin shapes.

Centre

Tissue tarpaulin shapes easily over support poles and sides. Folding over the ends is the tricky part.

Below

Painting tarps a variety of faded colours adds realism. Using a painting horse means no over paint on your wagons.





The two different colourschemes of Victoria's GY open wagons are shown in this scene at Naracoorte in 1976. The yellow body and red chassis replaced the all red with yellow stripe scheme. The white squares indicate to a shunter which side of the wagon has the hand brake lever as the wagon rolls toward him. The outside sill of the red GY 968 is obvious compared to the more common types alongside. Photo by Phil Curnow

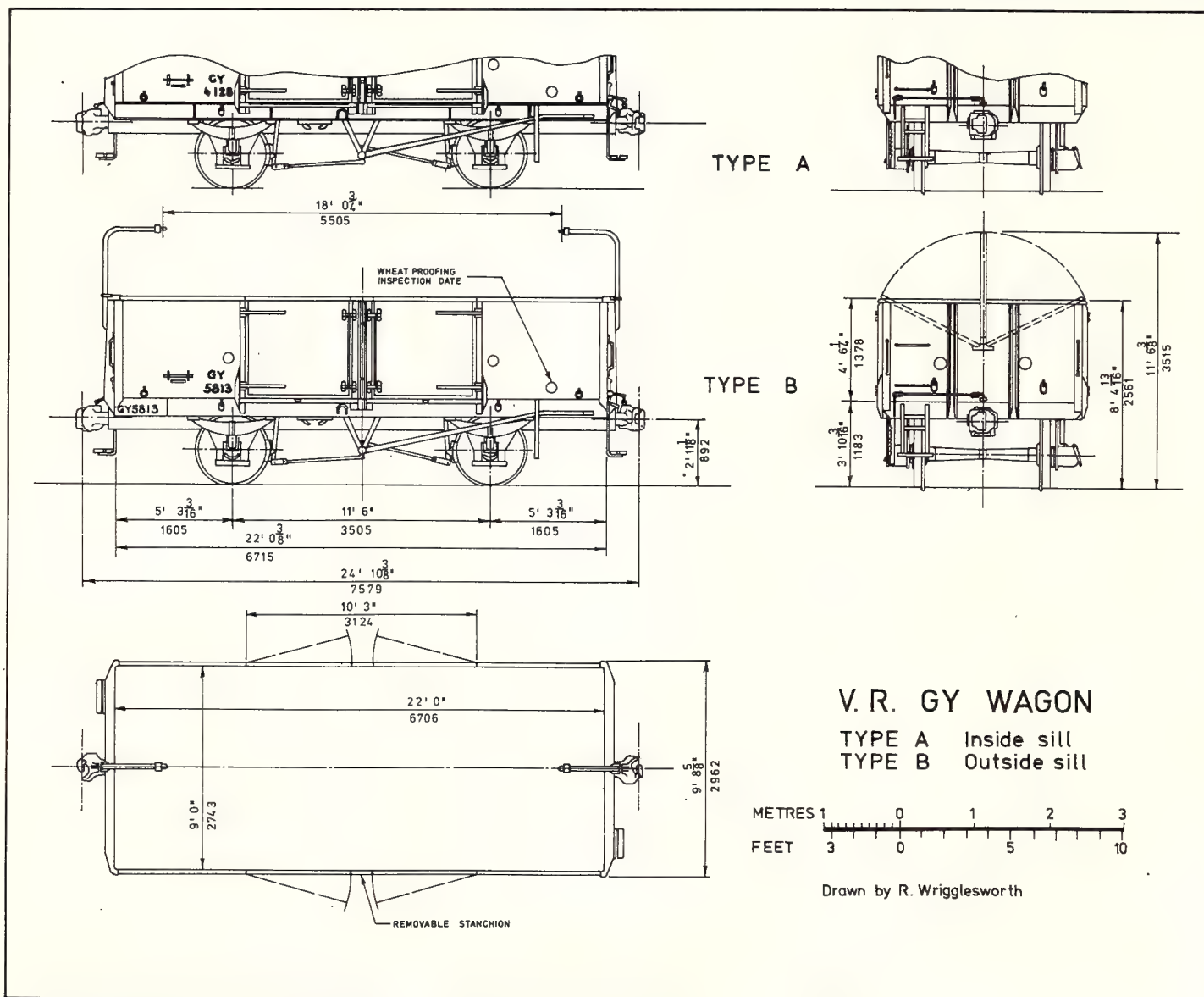
PROTOTYPE PLAN

V.R. 'GY' 4 wheel Open Wagon.

History

The GY wagon is a four wheeled open wagon of all steel construction that has been the mainstay of the Victorian Railways goods fleet for 40 years. The GY class is one of the largest classes of wagons on the VR, second only to the I/IA group, which over the years used every number in the range, 1 to 15869.

The GY is the only four wheel gondola style



wagon to be retained by Vicrail. Like all four wheelers they are limited to lower train speeds than bogie vehicles, presently 45mph (75kph).

Numbering programme

The GY's are of several different types and can be distinguished by the following numbers and variances:-

No's 1-910	Lever handbrake, inside sills. Built from 1939-43 at Newport, Ballarat and Bendigo.
No's 911-1160	(excluding 1080) Transverse (wheel) handbrake, outside sills. Built from 1928-34 a IZ's at Newport. Converted to GY's from 1965 to about 1970.
No 1080	Transverse handbrake with inside sills. Built as a GZ in 1935 and converted to a GY in 1966.
No's 2001-3129	Lever handbrake, inside sill. Built at Newport, and Bendigo and by AE Goodwin from 1943-47, 1949-50.
No's 3380-6129	Construction as above. Built at Birmingham Car & Wagon Co. (UK), Metro Cammell Car & Wagon Co. (UK), and Pressed Steel Co. (UK) during 1950-53.
No's 6130-6149	Built as private owner wagons for Australian Paper Manufacturers Ltd. by AE Goodwin in 1951. Numbered APM 1-20. Converted to GY's in 1956.
No's 15870-17030	Lever handbrake, inside sills. Built as HY's during period 1948-58 at Newport and Bendigo Shops. Converted to GY's from 1962 onwards.

Note: The number group from 2001 to 6129 were built under a post Second World War reconstruction and rehabilitation scheme called 'Operation Phoenix'.

In 1975 there were 6149 GY's on register in service. By 1979 these numbers had been reduced to 6100.

Further Developments

In 1979 VicRail, in conjunction with the Grain Elevators Board, began experimenting with a covered grain hopper wagon based on a GY. GY 2207 was outshopped earlier this year with a steel roof and drop door hoppers and placed into service during the bumper wheat harvest. Operations were deemed successful enough for a pilot run of 400 conversions to be commenced.

Tonnage Ratings

The 16/22 stencilled markings seen on GY's have given rise to several misconceptions, one being that it refers to tonnage limits on different weight rail. The correct interpretation is that the figures refer to the freight charge differential applicable to GY's. This structure is a continuing application of the I/A wagon "dual capacity" goods rate, introduced in the 1930's.

For freight weighing less than 16 tons, carried in a GY, a lower freight rate applies called the "Under 16 ton rate." Freight carried weighing over 16 tons attracts a higher freight rate called the "22 ton rate".

Prototype research compiled by
Peter Vincent.

BOOKS

reviewed by John Bevan

The 100th issue of the Australian Model Railway Magazine has come in what seems a short time from its start. I can remember preparing the 50th issue and wondering then if there would ever be a 100th issue. Time has flown and it's here. This has only been possible through the hard work of the current Managing Editor in particular and the rest of his staff. I thank them for their efforts and look forward to a long and happy association with them.

One of my readers has taken me to task for commenting about the accuracy of a book in which he found some errors. Of course it has never been the role of this book reviewer (or most book reviewers) to publish a detailed list of the errors made in a book. This is worsened by the tendency of critics to interpret any disagreement or statement of opinion by an author to be an error. It is obviously impossible for the reviewer to be an expert on every topic and to completely check every word in a book with the impeccable sources of the armchair critic.

A new publisher of Australian books, Searail Productions, has produced the first of their railway books after having produced two books on ships. The book is titled "A Guide to the Railways of New South Wales" and its purpose is exactly described in that title. It was edited by Stuart Sharp one of the directors of the publishers who called upon specialists to write the sections.

The book does not plan to be a complete answer to all questions about the railways of NSW but aims to provide a general survey of the system and provide a starting point for further reading. The book is logically divided into three parts. The first part called "Service Director" provides in 11 chapters notes on diverse topics like freight and passenger operations, journeys of note, how to buy tickets, history, politics and administration and geography. The next part "Subject Director" gives descriptions of locomotive classes, passenger cars and freight wagons, signalling, civil engineering, and private railways. The remaining part "Geographical Directory" provides a description of locale, traffic and history line by line throughout the state.

The book is 185 mm x 240 mm size and contains 185 pages. It has been type set on ordinary typewriter with rubdown lettering headings and unfortunately displays the poor appearance hard to avoid with this style of production. It contains photos, mainly of trains in operation, separating the chapters.

The major shortcoming in this book is the absence of a detailed description of the electrified parts of the system. In view of the importance that electric railways are certain to assume in the future it seems strange that there was no description of the existing and proposed system.

In the interests of accuracy the publishers have supplied a list of corrections and additional information.

The allied field of Model Engineering is covered in a new British book from the publishers of model books, Model and Allied Publications. The book is titled "Workshop Chatter" and is subtitled "A Bedside Book for Model Engineers". It is written by Martin Evans whose jacket biography lists an impressive history of involvement in model engineering and model railways.

The author has defined model engineering to exclude model locomotives in scales smaller than 1/2 inch to the foot, thus providing a clear barrier between model engineering and model

railways.

The book has seven written chapters which provide some background on the hobby generally, workshops, tools, lathes, clubs and societies, exhibitions, and personalities. Interspersed are groups of photographs and six poems. The author has a friendly chatty style of writing but still contains much useful information.

This book is interesting and informative but is spoiled by two things. Its photographs are poorly reproduced containing almost no detail and its high price, \$14.50. For a few it would still be worth buying.

"Workshop Chatter" by Martin Evans. Published 1979 by Argus Books, England, ISBN 0 85242 608 9. My copy from the publishers' agents. Recommended retail price \$14.50.

"A Guide to the Railways of New South Wales" Stuart Sharp, editor. Published by Searail Productions, GPO Box 1805 Sydney 1979. ISBN 0 909096 03 1. Recommended retail price about \$7.50. Available from ARHS and most bookstores.

N.S.W. VEHICLE COUNTDOWN - 13

In 1969, the N.S.W.G.R. had 27 '3453' series suburban electric control motor cars available for service. By 1978, only 15 vehicles of this class remained on the N.S.W.P.T.C. register.

Paul Rogers

SOUTHERN CROSS MODEL RAILWAY ASSOCIATION

Secretary: Trevor Moore.

Membership Enquiries:

P.O. Box 84,
Miller, N.S.W. 2168.

DIVISIONAL REPRESENTATIVES:

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Ph: (02) 602 3117

Victoria:

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1/1613 Fern Tree Gully Rd.,
Knoxfield, 3180.
Ph: (03) 763 8763.

The Annual Membership fee for the SCMRA is \$8 from March to February and \$6 Joining Fee.

Membership entitles you to participate in the activities of the Association, to receive AMRM, and our newsheet Booster. Standards, Recommended Practices and Information Sheets covering model railway practice are included in the joining kit together with a vinyl ring binder and are also issued at regular intervals.

For further details write to the secretary or contact the divisional representative

Meetings are usually organised on the second Saturday on each month in New South Wales, Victoria and Queensland. For further details and location please contact the divisional representative.

Victoria:

February 9: Meeting at Melbourne Model Railway Society, East Melbourne.
March 8: Annual Camberwell Exhibition.
April 12: Meeting at Croydon.

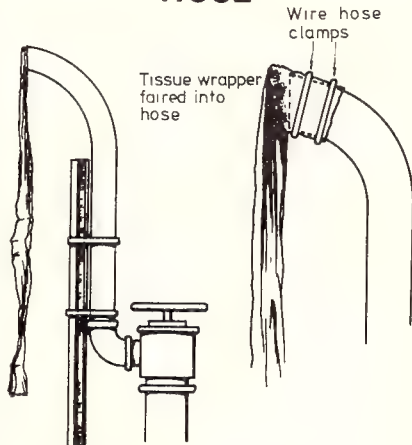
New South Wales:

February 9: Meeting at Narrabeena.
March 8: Meeting at Mt Pritchard.
April 12: Meeting at Rydalmere.

Queensland:

February 9: Meeting at Brighton.
March 8: Meeting at Zillmere.

CANVAS WATER CRANE HOSE



Roll toilet tissue, smeared on one side with PVA glue, around a rod three or four times. Pull the rod out before the glue starts to set. It will concertina as you do it, but that will be an advantage. Don't straighten the creases out. Prototype hoses develop creases when being pulled up to go into the water hatches, and some become permanent. While the glue is still wet, squash the hose more or less flat, which is the form canvas hoses take when not pumping water.

If you have a water crane like the one in the sketch, just make a flat joint when cementing it to the end of the outlet pipe. Wrap a small piece of glue smeared tissue around the joint and pipe end, and fair the edges in to the tissue hose with your fingers. The glue will make the tissue go a little like papier mache and form an invisible joint. Wrap a couple of wire bands around the pipe to simulate the hose clamps.

Paint the hose off-white (just a hint of brown), and brush orange rust streaks down the hose later. The water brings the rust colour out from the pipes and stains the hose.

Ross Hurley

AMRM AND THE BEGINNER

Christmas gift giving is often the start of a model railway and those beginners who turn to AMRM for guidance may feel disappointed. This magazine is produced entirely by volunteers and the many authors contribute articles that reflect their particular interests. Professional magazines produced overseas pay their contributors and so are able to arrange articles on how to build layouts etc. One American magazine produces these articles frequently which is fine for the beginner.

The modeller with a few years experience behind him soon finds that these articles are fairly similar because the basics of track laying and board construction don't change very much. He then realises that parts of his magazine are reworks of what he read a year or so ago. AMRM is run to a tight budget and we feel that repeating articles is to be avoided when they appear frequently elsewhere. We also believe that there are some excellent soft cover books produced by Kalmbach, Peco, Carstens etc. which can treat the beginner to a far more detailed account of what to do. These books include diagrams and photos and text...a real 'how to do it in simple easy steps'!

The editorial staff of AMRM strongly recommend that you visit your local model railway shop where you will find staff who can help you choose which of these books is of most practical use to you. You can be sure that the methods used have been proved over the years to be good and reliable.

Getting back to what authors contribute you will notice that the majority of AMRM articles do not feature engines, wagons, buildings etc. that are readily available at your model railway shop. Although we will gladly print articles by Australian modellers regardless of the prototype, we receive mostly articles on local railways particularly from New South Wales, South Australia and Victoria and less frequently from the other States. The modelling of local railways is still in its infancy as far as commercial models are concerned. Hopefully as the potential market grows the manufacturers will see that there is scope to build a demand for their products.

Where does this leave the beginner and AMRM? As mentioned earlier we are reluctant to frequently run articles on building baseboards and doing electrical wiring of basic layouts because the subject is well covered in books. If you wish to know how to build wagons and engines similar to those you see at your local station this is the magazine to read. Actually after a few attempts you will realise that although an article is written about building a wagon you have never seen the METHOD used can apply to a wagon that you like. We include many articles on engines and wagons that give historical information on how they were used in years gone by because the modelling of railways as they appeared in the 1950 era appears to be a growing trend. Reading these articles may give you ideas on how to use your layout.

We suggest you read this magazine with a view to the future. Have a go at some of the construction articles and build your experience as well as models. If you make appalling models don't despair. Rest assured that very few people reach at first attempt the standard that they never improve. Keep some of your mistakes for later so that you can look back and marvel at your progress.

Many people who adopt model railways as a hobby make several layouts during their 'career'. Bruce Block built the layout featured in this and the previous issue but this is his fifth and he is now planning his sixth. Other layouts remind us of Paddy's hammer. He said he still has the same hammer he bought fifty years ago but admits that it has had four heads and ten handles in that time. Some modellers never stop improving their layout rather than demolish and start again.

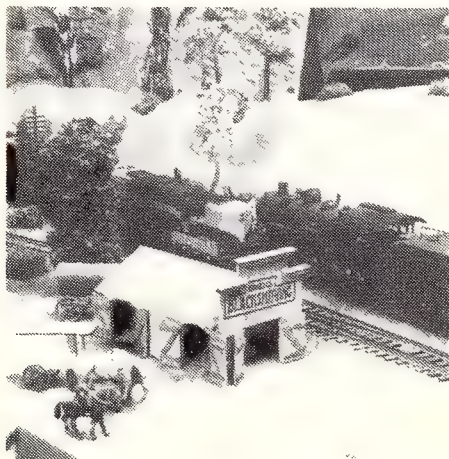
So in the words of Norm 'ave a go, Sport. Whatever you do make it the best of your ability at that time. Remember your hobby shop staff are there to help you if they can. Visit your local model railway Club, introduce yourself and join the activities. If you have suggestions on improving AMRM let us know.

Good luck with your hobby.

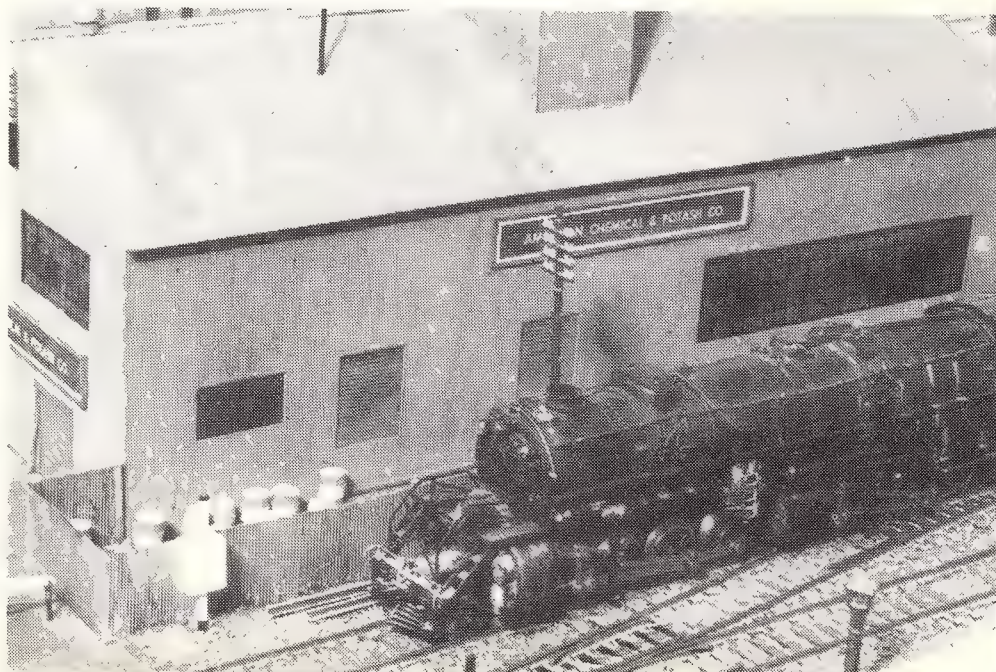
Phil Curnow.

Two more scenes on Bruce Block's Santa Fe styled layout.

Below Athearn EMD GP-9 Great Northern diesel and a Hallmark ATSF Consolidation pass in the local western township. The stock cars have been weathered with artists oils, using a dirty white to simulate lime on the floors.



Below A Rivarossi Y6B articulated, with some minor shopping modifications to bring it more closely to the ATSF 1790 class, drags by part of the heavy industrial complex — a Suydam metal kit.



INSTANT START INERTIA CONTROL

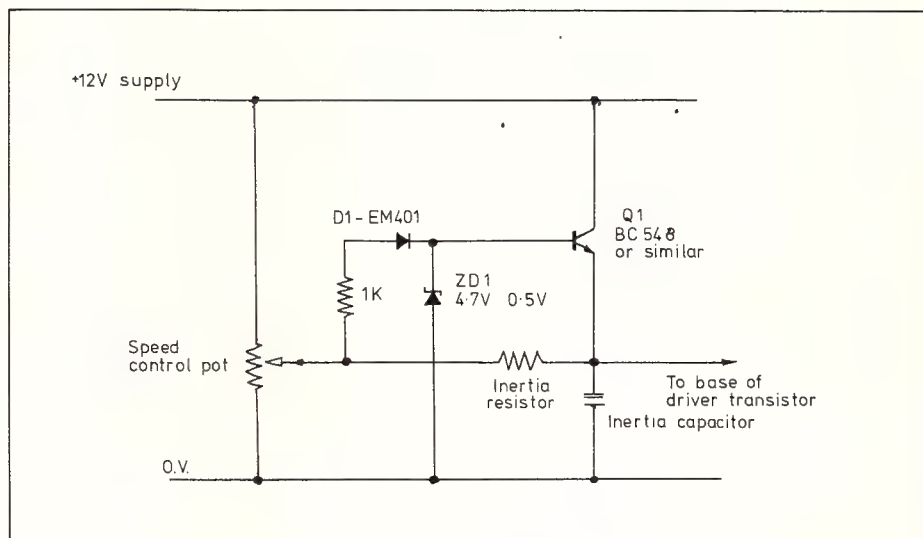
The greatest thrill of railroad modelling comes from being able to achieve the ultimate of realism at every stage. When it comes to operating trains, inertia type controllers allow the driver to get realistic starting and stopping of his locomotives.

Unfortunately, inertia controllers generally suffer the disadvantage of considerable delay while sufficient voltage is built up to get the locomotive moving. The magnitude of this disadvantage reaches disastrous proportions when operating with timetables in scale times of one or two scale minutes between stations and twenty to forty seconds real time delays. The most common approach to overcoming this problem is to provide some form of 'bleed' or minimum voltage to the locomotive so that when starting, the voltage is already close to that required to get the locomotive under way. This solution does, in itself, however, pose further problems. If the 'bleed' voltage is made high enough to give reasonably prompt starting, slow running may well be impossible and the brake may be required to be held on to prevent creeping of the train at signals, stations, etc. If the voltage is kept small, to prevent this, there may be little difference to starting delays but there remains the risk of overheating the motor by holding it stationary while at the same time applying voltage to it. A satisfactory solution to the problem, that requires very few components, and some simple circuitry is shown in the diagram and explained below.

How to install it

Inertia controllers generally operate by using a capacitor to delay the build up of voltage on the base of the driver transistor, the degree of delay being determined by the value of the capacitor and the resistor feeding it. The principle of operation of the instant start circuit is to bypass the delay resistor until the locomotive starts and then hand the inertia control back to the resistor capacitor combination.

To install the circuit, first locate the line that leads from the speed control potentiometer to the time delay resistor and connect a wire to it. This wire is connected to the 1k ohm



resistor, then to the diode, D1, and finally to the base of the start transistor, Q1. The zener diode, ZD1, is connected from the base of the transistor to the main system ground. The collector of the start transistor is connected directly to the main positive supply and the emitter is connected to the junction of the delay resistor and the delay capacitor.

The value shown in the diagram for the zener diode is a suggestion only, it has been found to work well on the prototype controller with a wide range of locomotives and loads. However, adjustments to the value may be made to suit individual requirements. With suitable switching, a bank of two or three diodes of different values could be installed to provide a selection of starting voltages.

How it works

When the throttle is opened the start transistor turns on fully and the main supply voltage is fed direct to the inertia capacitor

charging it instantaneously to the starting voltage, which is set by the value of the zener diode. The charge on the capacitor then builds slowly through the delay resistor to the level set by the throttle position, to increase the speed of the train realistically at a rate determined by the value of the delay resistor and capacitor. Slow running is unaffected by the additional circuitry because at voltages below the starting, or zener voltage the level set by the throttle controls the voltage through the start transistor. Output voltages to the locomotive down to zero can be obtained.

Jim Crew

CASSEROLE A LA BANNER SIGNAL

My interest in Semaphore and Banner signals of the N.S.W.R. began whilst I was still at school.

In the early 1940's, the goods sidings and signals at Regents Park, where I then lived, were altered and some glass enclosed signals were placed in position.

Since those days I have considered making a model signal of various types. Many years later, when I painted my Model Railway Room, I decided to construct a glass enclosed Banner signal about 2/3rd full size. A discarded aluminium casserole dish, complete with lid, became the basis of my signal. After reducing the depth of the dish, 2 globe holders were constructed from flat aluminium sheet and were rivetted to the sides of the dish. An angle iron frame formed the legs. Only the rim of the lid was used to hold the glass front which was joined together with putty and this is held to the signal with a self tapping screw. To represent the casting of the prototype signal, sheet aluminium was used to fabricate the mechanism housing and it was rivetted to the rear of the dish. Plastic metal filler putty was applied to the joints and smoothed.

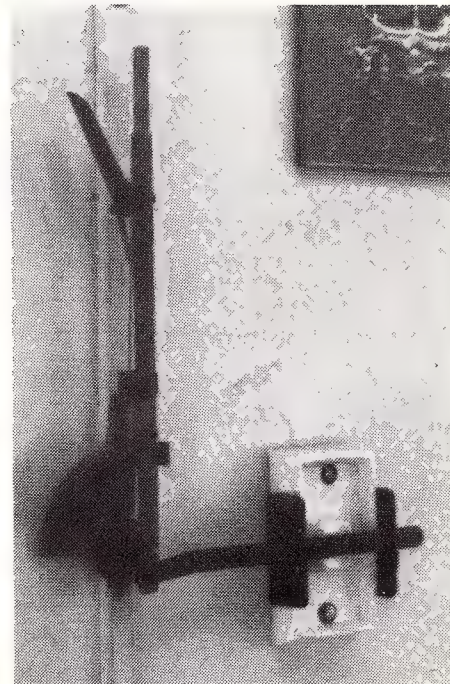
The signal is fitted to the outside of the Railway Room and is illuminated at night. The arm is controlled from the inside of the room by a lever, made up from scrap steel. When the signal is pulled "off" by the lever, it also switches on the power to the Model Railway. It serves as a visual reminder should I leave the power on in the Railway Room.

Later, I may construct a Lower Quadrant Semaphore or a Relph disc which should help to create the right atmosphere for people entering the portals of the North Rocks Rail.

Ted Gray



The signal with the "CLEAR/ON" position. Actuating the mechanism will rotate the bar in the disc to the horizontal "OFF" position.



Controlling lever for signal in "ON" position.

AMRM

A SHORT HISTORY

The Australian MODEL RAILWAY Magazine then known as the Australasian Model Railroad Magazine, was first published in 1963 (April/May) when Dr Tim Moss headed a small team that turned the house journal (The Booster) of the NMRA Southern Cross Region into a glossy paper magazine on sale to the general public. The first issue of 28 pages, in a format slightly smaller than the current issue cost 2/6 (two shillings and sixpence), or 25 cents in the decimal coinage. The first issue featured an article by John Wheeler on Scratch Building for Beginners, and the most prominent advert was that by Model Dockyard advising that the HO scale C38 model had arrived.

The committee that assisted Dr Moss for the first issue was Basil Hammersley, Frank Maxwell, John Wheeler, Ken Spilsted, Ivan Ive, N. Coughlan and J. Parker and was printed by Publicity Press, who are still the printers. A plan of the NSWGR 45 class diesel was the first of many Australian prototype plans that became a feature of AMRM.

From the very beginning authors wrote about the local scene, and a photograph in Issue 2 featured a NSWGR 'MRC' van in 2 mm scale. The magazine staff worked closely with local associations and Issue 3 featured, among some fine articles, a programme of the Sydney Model Railway Exhibition. It is interesting to note that public activities of some modellers commenced with 'letters to the editor' and in many cases resulted with the said modeller joining the staff. Terry Carpenter was one of these joining the staff as Subscription Manager from Issue 3, and later was partially responsible for maintaining AMRM in publication.

Also from the very beginning AMRM relied upon readers for articles and a section of the very first Editorial bears repeating:

'Who are the ones who make a magazine like this possible? You. Yes, you the reader, who is interested in railway modelling in all its varied forms. There are so many of you continually experimenting, trying out new ways of building, improving old methods, using new materials that there is a constant source of subjects that are of interest to us whether it be a simple kink or a detailed electrical circuit. You're a photographer, a loco builder, a scenicking crank or a fellow who thinks he has invented the best-yet automatic coupler. Whatever you do and whether you run the cheapest tinplate train set or spend three years on building the largest of railway layouts, YOU make this magazine.' ... These comments have not changed after 100 issues and nearly seventeen years.

The magazine was published every second month, by the team, and commenced featuring the Australian prototype modelling article with great gusto. Among the authors responsible for these articles were Chris Pratten, Paul Van Leuven, Jack Grieson and Howard Armstrong. Jack Grieson's article on building a Z18 introduced many, including this author, to scratchbuilding and NSW prototype. The initial circulation was under 4,000 and was circulated around Australia by Gordon and Gotch.

Dr Moss continued as editor until 1968, July/August issue, producing each issue with current news and interesting articles, maintaining an Australian (prototype) flavour, that not only encouraged new railway modellers to adopt Australian trains as their base mode but also convinced established modellers to change to model the local scene.

The magazine also expressed the viewpoint of the Southern Cross Region of the NMRA until the organisation became an incorporated body known as Southern Cross Model Railway Association, in 1967.

Peter Wooley took over the editor's chair after assisting or being in the production department for a few issues. It is easy to see when Peter took production in hand for he had a different style to Tim Moss. Peter, from the outset, purposely planned to bring Australian prototype before the reader, and was quite successful, with fine articles such as Russ Siddall's VR 'T' class, Garry Kahler's NSW 'CPH', Frank Kelly's 'Working Vestibule' and John Beckhaus' 'Lander Cars'. Peter was assisted by some helpers who still contribute today, including John Bevan, Ian Weickhardt, John Beckhaus, Frank Kelly, while on the staff John Bevan, Terry Carpenter, Howard Armstrong, Norm Coughlan and Arthur Hunt assisted ably. Peter was instrumental in producing the issue (No. 38) that was tagged 'The Tram Issue' by tram hating modellers. This seemed to be a period from when modellers would generalise their comments unjustly, for out of eleven articles there were only four dealing with traction. (Another generalisation is made, usually by non-NSWGR modellers with 'It's always NSW', again unjustly).

The magazine helped promote a Convention and produced the July/August 1969 issue to coincide with the happening. During Peter's leadership, Australian profile modelling started to increase in interest, and there is little doubt that AMRM was the main reason for the interest, resulting in manufacturers/importers coming to the scene; MRC, Friedmont and Berg's Hobbies are just a few. The interest in the Australian scene was kept before the reader's eyes with articles from readers, plus discussion in the editorial and Mail Bag sections. Prototype Plan section always featured a scale plan of an Australian engine or piece of rolling stock, and the Hobby Shop Detective always seemed able to dig out the models to interest the readers, as of course did the Reviews section, reviewing Australian products, showing both the good and bad aspects of the unit.

In 1970, Russel Merriman took the driver's seat and produced as his first issue (to coincide with the opening of the Standard gauge from Sydney to Perth) a 32-page issue featuring many aspects and details linked with the Standard gauge. Russel was assisted by a small team (in retrospect too small) consisting of John Bevan, Bob Kable, John Beckhaus and Arthur Hunt, and later Ray Wurlod. It was during this period that the printing process was changed to offset, where photographs were no longer prohibitive in cost to reproduce.

The magazine ambled along, beautifully, now being fully Australian in style and content. Some very good articles and authors kept the flag flying and modellers were always waiting for the next issue to appear. Unfortunately some issues started to appear late, which the small editorial group seemed to find hard to catch up the back lag. Some of the top class articles that appeared during Russel's editorship included Peter Felberg and Hugh Williams' 'SAR Coal Gantry', Max Chaseling's 'QR BB18½', Paul Garrett's 'NSWGR 40 class' and Bob Gallagher's 'NSW 20 class'. Other contributors included Ian Thorpe, Allan Templeman, Philip Graham and Ian Weickhardt.

Ray Wurlod officially took over the editor's chair with the November/December 1972 issue, still with a small team and very little overall support from readers with articles, resulting in AMRM staff produced articles, the time taken to produce the articles delaying publication of the 28 to 32 page issues continually. Ten years of publication was celebrated in May 1973, with the publication of the March/April 1973 issue, this issue featuring the first of Clive Huggan's 'TRACK' articles. Lack of support by readers and a gradual lack of support by staff members saw Ray producing the magazine virtually on his own, when his job allowed, and two issues were missed to try and catch up the leeway. Despite these serious problems, which actually threatened the life of AMRM, some very good articles were published, especially the 'Track' series and Bob Yule's 'Trestle Bridge'.

Bob Gallagher joined the staff in January of 1974 in the capacity of Managing Editor, taking over as editor in October 1974 when Ray moved to the ACT. It was during this period that a team of workers began to assemble around a flailing AMRM and Bob was able to include in the team modellers from out of the state of NSW who not only had the interest but also the ability to write high class articles. Bob continued as editor until Allan Brown became responsible for editorial work with the January/February 1976 issue, leaving Bob free to manage the business side of the publication and organise the many assistants and projects.

As experience allowed the Gallagher/Brown team streamlined and dressed up AMRM to the standard it has today reached. There has been many who have assisted, the list on page eleven of this issue showing those now helping, but a few gave extra special effort, and this included Ian Thorpe who took it upon himself to ensure that all diagrams were of professional appearance, Graham Ball who has the continuing task of photographing all the review section as well as numerous other work, Roger Johnson for his draughtmanship, not forgetting John Casey for supplying back issues to readers and Ted Cole for his management of the Subscription Department.

The article content and quality has, over the last five years, been equal to the overseas publications, a credit to both the authors and the AMRM staff who work on the production aspect of the magazine. Readers are still encouraged to contribute but most of the articles are now produced by the many staff members. The magazine has grown to a 64-page publication, and apart from last issue, has not been late for over five years, which does say a lot for the crew who give up their spare time to produce the magazine, not forgetting the group of workers who, under Trevor Moore's guidance, pack and post it to numerous destinations.

At present, AMRM has a sold circulation rate nearing 7,400, copies of which travel all over the world. This issue has a colour feature which will be continued as finances permit. To assist these finances AMRM has been supported by many trade houses, some of which have been included in virtually every issue. Model Dockyard and Australian Model Craft are two who have exposed their goods in AMRM and two of those whose support has been of tremendous value in encouragement and financial terms. AMRM is on a solid footing these days, and enjoys the support of many. It

Continued on page 52

REVIEWS

Victorian Railways 1904 Rolling Stock Diagram Book, published by the Victorian Model Railway Society. Sample supplied by Colortype Printing Pty Ltd, 63 Parsons Street, Kensington, Victoria. Price: \$23.00.

Railway systems used small diagrams of rolling stock vehicles to record size, capacity and identity within the said system. Most of these diagrams were not accurate nor produced to any specific scale but they were, and remain to be, of great use to the modeller. The problem of course is that very few systems bother to keep any such record after the vehicle has ceased active service, or if the diagrams are kept they are not available to the public that requires to use them.

Fortunately for the modellers of the Victorian Railway system the Victorian Model Railway Society, via member Frank Kelly, were able to obtain the diagram book for the year 1904, and reprint it for the modelling public. The 66 pages of diagrams are contained on 385mm x 280mm pages between well bound hard covers. The lead pages give the origin of the book and include the volume number, there being only 400 of a planned 750 copies printed. Also included is a full page photograph of the 'M' class tank locomotive.

The VR were slightly better than the usual Australian railway system in that they printed the 1904 diagram book in 1/8 inch scale and the diagrams are reprinted in the same scale. Locomotive diagrams are side elevation only; passenger cars are side and interior elevation while goods wagons are side and plan view. Also included is the relevant information useful to the modeller (i.e. number of units built and road numbers as well as locomotive specifications). Basic dimensions are included on all diagrams and, in some cases, the manufacturer is also included. It is believed that all vehicles in service on the Victorian Railways are represented in this book, and this includes VR & SAR joint stock vehicles.

This book is very well printed and beautifully presented, and due to the low number printed will no doubt become a collector's item in years to come, if not now. For the VR modeller interested in modelling the early period of the VR this book is an essential purchase and would also be of useful assistance to even the modern day modeller, for the basis of many vehicles now in service are enclosed between the hard bound covers.

Despite the price, a bargain, that is if you can get hold of one.

Bob Gallagher.

HO Scale Suburban Station Kit by Berg's Plastic Models. Sample supplied by Berg's Hobbies, 223 Church Street, Parramatta 2150. Price: \$14.95.

For many years the Australian prototype modeller has been struggling, gaining occasional lifts from some commercial products, but basically relying on scratchbuilding for the production of models. The suburban station kit under review will, as time goes by, prove to be the beginning of a new era in Australian prototype modelling for AT LAST an effort has been made to produce a high quality kit, aimed directly at the average Australian prototype modeller.

The kit, made in Denmark, is a representation of a

Sydney suburban (island platform) station. The main structure is brick and is typical of buildings built in the 1920-30 period. The style of structure is not limited to Sydney for similar structures were constructed around the state (Gaylong and Wyong are just two). The kit would only need partial modification to produce an exact model of a specific prototype.

For the purpose of this review the kit, as supplied, was assembled as per directions. These are so brief that most of the assembly methods are left to the modeller's own skills. The kit is supplied packaged in a card box and all parts are attached to coloured sprue sections. The colour used is a brick red for the walls, green for trim, yellow for windows and stone cappings, grey for the roof and clear for glass. Some of the colours are not what some modellers will require, especially the green trim, the stone roof supports and window/door cappings. These (if required) should be repainted prior to assembly.

Tools for assembly were restricted to a sharp knife (scalpel), a flat file, a fine paint brush and MEK liquid adhesive. Before actual assembly commenced there is an error in the kit which needs correcting. The error involves the photo of the model on the lid and the base of the model. The men's toilet door and privacy fence is on the wrong end. This is easily rectified by matching the toilet door end, (part No 1) to the side with the higher windows (i.e. toilet windows). A clearance notch for the door entrance should be filed in the locating ridge on the floor section — a one-minute task.

For assembly all parts must be severed from the retaining sprues with a sharp knife. The break should be filed clean — if this is not done the kit will not fit together. All components need this attention. Fit the four walls together, making the above mentioned change with the men's toilet door, and glue together — and to the base. MEK liquid adhesive was used and applied with a fine paint brush. It is a simple task of dipping the brush into the MEK and then brushing a fine film on the rear (hidden) part of the joint. A light application will fix the joint in 5 to 10 seconds.

Doors, windows, roof supports and window/door cappings should then be fitted to the wall/door assembly. Care should be taken to assemble the toilet windows correctly, in that the small pane is the lower section of the window, thus the louvers to the top. Fit the window glazing to the windows first and then the assembly is fitted to the wall from the rear. The door is also fitted from the rear. The window/door cappings fit into the small recesses above the doors and windows; there are several different sizes to fit the different window sizes. The stone supports for the roof supports are added next and these fit into the small recesses on the brick columns — some will need filing to fit. Just trim a little off each side edge (where they fit onto the wall) and hold in place and glue (just towel the MEK onto the top edge of the section). The green roof supports are next and some will need filing to fit them into the locating grooves on the walls. Next add the wall signs, after gluing the respective signs to each plastic section (the private sign needs an 'E' to make it correct).

When fitting the roof take each section and bend it in the middle to form the angle between the roof and the platform cover; hold in place and glue. Repeat the process with the other side, add the roof ends, straighten the roof supports and glue into position — on the underside of the roof. Add the chimneys where a fireplace might be — i.e. on a division wall — and then add the privacy fence around the men's toilet door. The trolleys and garbage bin are a few extra

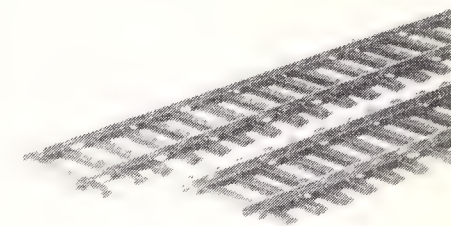
items to be added in place after the building is on the platform.

The kit makes up into a fine structure 75' long (plus 6' of privacy fence), 13' wide; the roof covers an area of 36'. The height is 17'6" while door heights are 7'. In all it is a building of unbelievable size and is a good representation of the prototypes, although the brick colour could be a browner shade of red. Assembly of the kit should not be beyond any modeller. Time for assembly was 3 hours but more time would be taken if super-detail is added.

The kit lends itself to kitbashing and AMRM editors do expect many modellers to customise the kit, simple tasks such as painting the stone section to represent stone, room dividers, open doors, lighting etc. etc.

A fine model — easy to assemble. The price is reasonable even when compared with other kits from Europe and the structure is one that can be used by virtually every modeller of NSW prototype.

Bob Gallagher



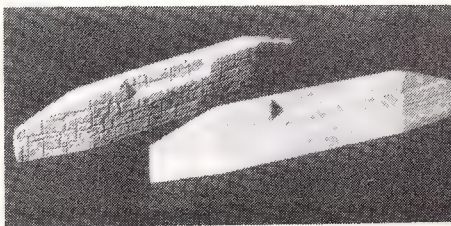
16.5mm gauge Flex Track by Railcraft. Samples supplied by Aspect Models, 9 McGregor Street, Canterbury, Vic 3126. Price in text.

In search of greater realism railway modellers are choosing to use fine scale (accurate scale) track and, generally, this means completely handlaying track and pointwork. Railcraft, from America, have made the task a little easier, for not only have they supplied the hobby with fine scale track components, but they have now released a range of flex track which caters for even the most fastidious fettler. The 16.5mm gauge range includes four sizes of rail: code 100, code 83, code 70 and code 55.

Generally, the gauge averages at 16.55mm (fractionally variable with the weather) and the rail height corresponds with the indicated size, i.e. 0.1" for code 100, 0.083" for code 83 and so on. The Nickel Silver rail size is proportioned to the rail height and is very nicely formed. The plastic sleepers, coloured brown with wood grain impressions, are 28.5mm long, 2.4mm wide and 1.8mm thick and they are not symmetrically arranged on the track; instead, they have the appearance of being hand-laid by 12" to the foot fettlers. The plastic spikes are the feature of the track in that they are only 0.45mm high off the sleeper giving a 1.4mm rail depth clearance from the head of the rail to the top of the spike on code 70 rail. No wonder the advertisements suggest that Rivarossi can run on this code 70 track! They are sold in 910mm lengths in bundles of six, code 100 costing \$20.50, code 83 \$21.50, and both code 70 and code 55 \$18.50. While the price may appear to be expensive, the individual length price compares favourably with other flex track. The track is easy to bend, the formation of the plastic joining sections between sleepers being so arranged that they hold the track to a symmetrical arch. However, care should be taken when bending the track for the rail section is so fine it is easy to kink.

A fine (scale) product, for those who wish to make their track as realistic as their models. What happened to the old adage 'the track is only the bits of metal the trains run on'?

Bob Gallagher



Culverts by SARMOD. Sample supplied by McBees Hobby Centre, PO Box 144, Coburg 3058. Price: \$2.60.

A culvert is "an arched drain or conduit for the passage of water under a road, railway or canal" according to Webster's Dictionary, and the small kit supplied by SARMOD in a plastic bag is the side abutments that hold back the ground on the side on



the water course. This kit has a hidden prize in that it has sufficient components for two culverts. The package comprises two stone abutments, two concrete abutments, two lengths of pre-painted 'I' beam and a well detailed and illustrated instruction sheet.

The abutments are epoxy mouldings, pre-painted and specifically shaped to accept the 'I' beams, but when using the stone abutment some care will have to be taken to ensure that the beam is not sitting too high for the track to remain level. The instruction leaflet is adequate for assembly and even the most hamfisted modeller could follow the instructions with good results. The pre-painted colour scheme is very good, as are the mouldings which are clean of any flash. The stone shapes, on close inspection, are not as good as some stone castings have been on Australian kits, but the overall effect is fine. The detail on the concrete abutments is so good it is difficult to describe. When a concrete abutment is to be made, formwork is used to make a wall behind which the concrete will be poured. Before the advent of chipboard and inexpensive plyboard, planks were used as the form boards. In most cases the boards were not the same thickness and, as the supporting beams were on the outside of the proposed abutment, it was always possible to find that the finished abutment had a ridged surface; hence it was possible to see where each board had been. Well, the SARMOD abutment shows all this plank detail, and it is possible that even the 12 gauge nail heads are showing (Not quite. Ed.). The detail is so fine and realistic that it would be only fair to suggest that the concrete abutments, by SARMOD, are the best on the market, and this includes all the injected moulded kits.

A beautiful product, relatively inexpensive, a well informed instruction sheet and it is made in (South) Australia, one aspect to be justly proud of.

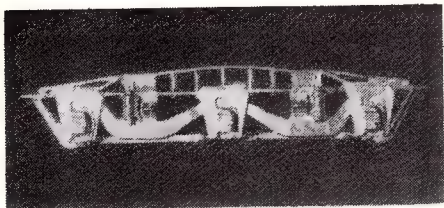
Bob Gallagher.

Northeastern timber shapes, for most scales. Sample supplied by McBees Hobby Centre, PO Box 144, Coburg. 3058. Price: \$1.45 per pack.

Northeastern timber shapes have been on the model railway market for many years, having been sold in 24" lengths and by the actual size. Milled from basswood, a very fine-grained timber, the shapes are mainly square or rectangular, although the full range of Northeastern shapes would need many pages of review to fully and adequately cover. The timber shapes are readily worked with knife, saw, sandpaper, and glues very well with PVA and super glue. Until recently it was difficult to see any adverts about Northeastern for, having a monopoly on the market, advertising was a futile exercise. But to the fore came Camino Scale Lumber, packed in 12" plastic envelopes and easily transported, which the long sections of Northeastern were not. Unfortunately, Camino did not stay around for long and Northeastern seem to have adopted the new (and better) packaging technique, and model railroaders reap the benefit. The usual finely milled timber is trimmed to 285 mm lengths and packaged in a plastic envelope which is labelled as to the scale size in HO and N scales. The sample inspected was for 3"x3" in HO scale (6"x6" in N) and there are 25 pieces in the pack. The number of pieces varies with the size of the timber. The range is wide and extremely useful. A humorous sideline is a part of the label which is "Doll House Materials".

The numerous uses of Northeastern timber is too many to describe but it is especially good to represent timber in structures.

Bob Gallagher.



VR 'E' series 6 wheel carriage bogies in HO scale by McBees Hobby Centre, PO Box 144, Coburg, Vic 3058. McBees Hobby Centre supplied the sample. Price: \$6.00.

Australian modelling has for many years accepted the use of makeshift bogies (of incorrect visual profile) under rolling stock, but the advent of PMH, and now McBees, seem to be enabling the modeller to make a choice as to use the correct bogie or not. The Australian product does not compare with those made for the American market but there has been a start made, and we can now proceed toward a better

and more accurate model.

The bogie kit under review is the six wheel truck as used under the Victorian Railways E series cars (AE, BE, CE and no doubt a few other special cars). The side-frames are cast metal, as is the 'H' shaped bolster. Plastruct is supplied for decorative straps and in the kit under review Cavalcade 10.5 mm wheels (spoked) have been supplied, although at the time of going to press the wheels are not being supplied (with a suitable adjustment in the price). The castings are sharp and need little cleaning-up, although a small file would achieve the task if required. Bearing points are marked and it is necessary to drill the axle hole with a No 55 drill (held in a pin vice). The hole need not be deep; just sufficient to hold the pinpoint section of the wheelset axle. The bolster section is glued in place with epoxy glue and as a suggestion ensure that the wheels are running true and square before the epoxy is fully set. The Plastruct section is fixed in place across the end of the bogie to represent the metal framing, as on the prototype. The assembly task is not difficult, and after painting, which could be achieved before the castings are assembled, the bogie looks quite attractive, and very accurate in dimensions.

Bob Gallagher.

Victorian Railways Rolling Stock Diagram book, 1904-1925. Published by the Victorian Model Railway Society. Sample supplied by the printer, Colortype Printing Pty Ltd, 63 Parsons St, Kensington, Victoria. Price: \$24.50.

Basically, this is the second volume to that issued earlier in 1979, and follows the same format, in size, cover, basic layout and quality. It covers, in diagram form, the rolling stock put into service on the VR during the period of 1904-1925, with one or two exceptions. The diagrams include steam locomotives (although the diagrams are only a side elevation) including classes A2, C, DD, K, G, DDE, F and the first electric locomotive. A feature photograph is of the DD class on page 70A. Cranes are featured, as is the McKean motor car, and the Steam motor car along with all the rail bus type units. The long 12 wheel cars have both a side elevation and a plan (inside) view shown, and SAR & VR (V & SAR) joint stock is so listed. There are 38 pages of diagrams on passenger cars which also include horse boxes and the original Z vans. The goods wagons section cover the many four wheelers presently being phased out of service, and page 124 lists the American freight wagons, which were a throw-off from the Webb era of the South Australian Railways. The narrow gauge (2'6") system is covered by the full range of rolling stock diagrams.

As with the first volume, the scale is 1/8", date of introduction and builder is listed as, in most cases, is the running numbers. The hard bound volume is numbered and, as with the first volume, will be a collectors item for many years to come. To the Victorian Modeller this and its associated volumes will be the 'VR Bible', and be continually referred to. There is only one thing that can better this volume, and that is the third volume covering the years 1925-1956, which is planned for a 1980 release. For the budding VR modeller these volumes are an essential purchase despite their cost.

Bob Gallagher.

Brisbane's Railways STEAM to ELECTRIC by A. M. West. Published by the Queensland Division of the Australian Railway Historical Society, PO Box 682, GPO, Brisbane 4001. Review copy supplied by the publisher. Price \$4.50 (incl postage).

This 52 page booklet was released to commemorate the inauguration, in November 1979, of electric rail service in Brisbane, and covers the many aspects of the Brisbane suburban system (which spreads west to Ipswich, north to Petrie and south to Kingston).

The booklet covers the locomotives (Tanks, PB15's, Pacifics and Diesels), carriages (from the very early cars right up to the latest stainless steel units), and railmotors. The electrification of the system is also covered from the idea stage to reality in 1979.

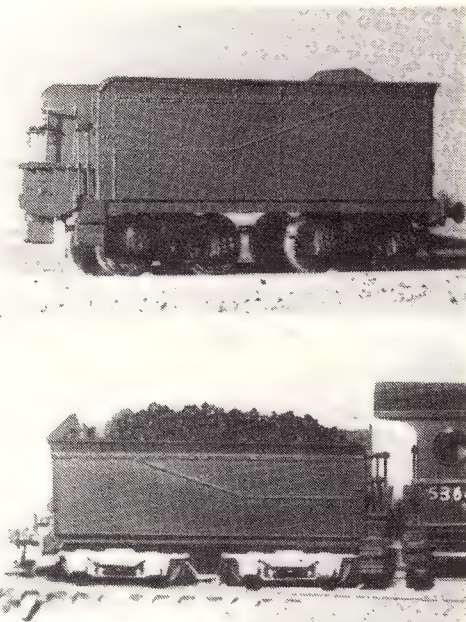
All aspects are illustrated with sharp and clear

black and white photographs. A map is also used to illustrate the size of the system. The cover of the booklet is a coloured coverage showing a contrast between a D17 hauling a red set, a 1720 class hauling a green set and a new electric set at speed.

Interested modellers who live far from Brisbane will gain relevant information on the system, locomotives and rolling stock from the interesting and well written text.

A fine, well produced book.

Bob Gallagher.



NSWGR 'WAMPU' tender kit in HO scale by FSM. PO Box 169 Forestville, NSW 2087. Sample supplied by FSM. Price: \$

The WAMPU tender kit is usually supplied by FSM with the D53 class locomotive kit (which will be reviewed soon in AMRM), but is also sold as a separate kit and, as such, is being reviewed as a separate identity.

The WAMPU tender was introduced to the NSWGR system with the D53 class which commenced service as the TF(939) class in 1912. The tender was used widely with the D53 even after the introduction of the standard goods turret tender (post 1945), and also with the D55 class. It was the tender selected to be fitted with an oil tank to fuel the oil firing of the D55 class during the coal shortage in 1946-47.

The kit, cast in metal alloy, comprises two sides, an end, coal face end, chassis, floor sections, water tank top and coal board, water filler, tool box and bogies which include Jackson 10.5 mm disc wheels that have been pinpointed (axles). Bogie fixing screws and springs were also supplied, and the chassis had been drilled and tapped to accept the screws.

The detail is sharp and well defined, the rivets being in line, if not a little too tall. The rear end detail includes cast-on marker lights and buffers which need fixing in place. The footplate is supplied in two sections, one part being the sections that raise the floor and a piece resembling a timber floor. There is very little flash evident; the only cleaning up needed is to remove (with a file) the nibs where the parts were joined onto the casting sprue.

The basis of the tender is the chassis and the sides are attached via lugs which fit onto the chassis. A little filing (off the chassis lugs) is needed to allow the ends to fit neatly onto the chassis. Repco-Woodhill super glue was used to attach the parts together, then a bead of epoxy glue was run down the back of each joint. After both ends were fixed in place the water tank top was fitted. The hand-rails were then added using the wire supplied, or a smaller size, (0.013" Walthers) and then the draw bar fitted. To allow the Wampu to run behind other locos the metal pin supplied was replaced with an 8 BA screw and nut. The pre-drilled hole was enlarged, tapped and the pre-shortened screw fitted. Before fitting, however, the lower 10 mm of thread was removed (by putting the screw in a drill and filing it off). To ensure complete fixation and good electrical conductivity a nut was affixed to the bottom of the screw, locking it into the chassis, and the epoxy glue put around both the screw head and the nut. The floor section was then added, as well as the buffers, steps, water hatch and tool box. A hand brake lever was formed from 0.020" wire and fixed in place. The assembled model was then washed in detergent and water, treated with Floquil Metal Conditioner and painted, a coal deck (styrene sheet) was then added and crushed coal glued in place. A Kadec 5 coupler was used, being fixed in place with a 10BA screw (not included in the kit).

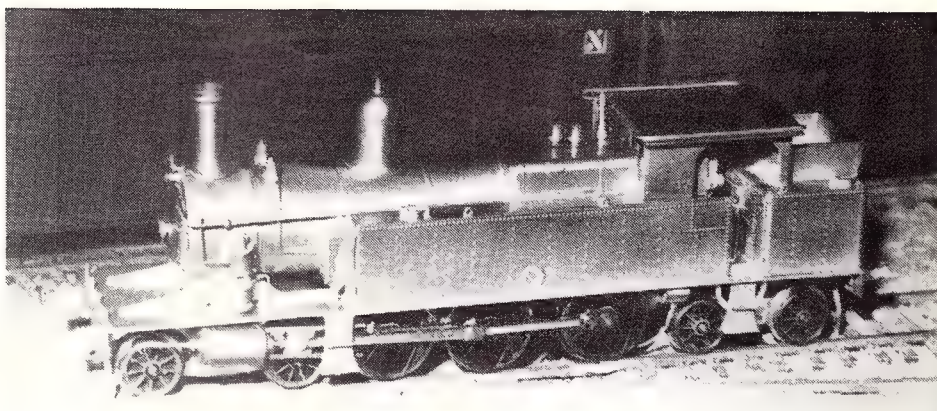
The bogies were assembled after one side of the wheelsets had been electrically 'shorted out' by drilling the insulation between the wheel and the axle and fitting a pin to provide electrical conductivity from the wheels to the axle and then through the bogie to the tender chassis where it is transferred to the engine unit via the draw bar. This field of

electrical conductivity must be 100% to allow the locomotive to run smoothly. The bogies did not run freely, so MGW brass bearing were fitted by drilling out the journals with a 5/64" drill (in a pin vice) and recessing the head of the bearing .5 mm below the surface of the bogie.

Washers had to be placed between the bogies and the tender to give the tender correct height. After painting, the contact surfaces between the bogies and the tender were cleaned to ensure electrical efficiency.

When compared with the DATA SHEET plan the model is very accurate and is a fine model, especially the bogies. Assembly time was approx 3 hours, which would be well within the capacity of the average modeller. The accompanying instruction leaflet, although a generalised sheet, supplied sufficient information to readily assemble the model.

Bob Gallagher.



George Berg has had the foresight to arrange the manufacture of extra boilers, funnels, domes, etc — in fact all parts that would ensure as good a C30 tank as the 30T. He has succeeded, for it is indeed a commendable model and (in this reviewer's opinion) superior to the 1974 model.

General construction and components, as stated, follow those of the 30T even to the blind centre drivers (for a comparative review of the C30T refer to the Jan/Feb 1979 issue). The motor is the same, ie a small 5-pole type driving onto the front axle via a reduction gearbox. As with the 30T this model also includes the boiler backplate in the cab. It is a shade lighter, weight-wise, than the 30T but pulls about the same load, once again limiting it to a more prototypical load. Electrical pick-up is still via the back pony truck, although slightly modified. Provision is made, both front and back, for Kadee couplers.

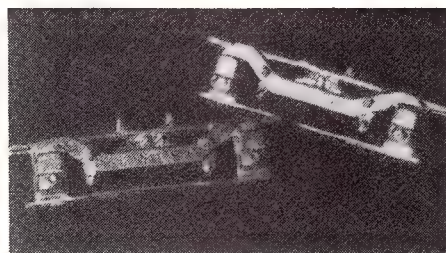
Most dimensions are correct, the one exception being in length. It is 9" too long forward of the smokebox, necessary to allow that all important swing on the front bogie.

The model, in comparison to its earlier version, is not fitted with lighting, ie no generator, lights, conduits, etc. However, this principle applied to a number of the class right up their demise. Some conjecture arises over the type of safety valve fitted to this model. Similarly, the style of whistle is in doubt, and the air line from the compressor to the cab is absent — finicky details which can easily be corrected by those wishing to do so.

On the review model sets 1 and 3 drivers were over gauge (set 2 doesn't have a flange, don't forget), and bawked through scale point frogs. Dropping the wheelsets out (taking particular note of the suspension springs) and closing in in a padded vice corrected the problem.

All in all a fine model at a good price. The Berg's team can once again be proud of a job well done.

Allan Brown



V.R. tender bogie sideframes. Samples supplied by McBees Hobby Centre, PO Box 144, Coburg, 3058. Price: \$2.40.

These metal cast sideframes are designed to represent the bogies as used under the A, C, D, K and N class locomotives as used on the Victorian Railways. The sideframes consist of castings, axle centre marked and lugged to hold the metal bolster. The castings are finely proportioned and need only a little cleaning up. The wheel centres are 18.5 mm wide and the journal 3.6 mm x 2.4 mm. A feature of the casting is the spring which is fully detailed on the inside surface of the sideframe. A fine addition to the market that seeks quality, accurate, detailed components.

Bob Gallagher

Aqua-Tac contact glue, by Norton Pty Ltd. Our sample from the manufacturer.

This is a new contact cement from Norton which is suitable for gluing plastics, metal, particle boards and just about any material the modeller is likely to use.

It is a white coloured glue with a thin consistency and is best applied with a brush or spatula to get an

even coat. Glue is applied to both surfaces to be bonded and then each piece is set aside until the normally white glue becomes almost clear. The work pieces are then joined and the glue sets quickly to make the joint.

I tested this glue by using it when assembling the Berg's station kit and it worked excellently.

The glue is easy to apply and when set gives a very strong bond. Excess glue is easily removed and the bonding time allows minor realignments to be made as the pieces are brought together.

Being an impatient modeller the 20 minutes waiting time for the glue to become clear is a bit of a nuisance but then there is always something else to do when waiting.

This glue then, whilst not specifically aimed at the modeller, can be used in a whole host of situations with excellent results for the modeller.

Ron Cunningham

AUSTRALIAN TRAINS IN COLOUR published by Western Colour Print P/L. Copy purchased from Casula Hobbies, Shop 7, Demeyrick Avenue and Hume Highway, Casula NSW 2170. Price: \$8.95.

This is a soft-covered book of approximately 52 pages. There is a brief introduction on the inside cover, a half page map of the various systems in Australia and the balance of the book is taken up with clear and interesting colour photos. All States, except Tasmania and SAR (now ANR) narrow gauge, and some private lines are covered. Steam, diesel, freight, passenger and tour trains are included.

The book has two main drawbacks. The photos are not presented in any sort of order. They are not divided into States, types of trains or motive power and so it is easy to find, on facing pages, such a jumble as an 830 SAR diesel, the bauxite unloader at Kwinana, a trio of NT class diesels near Tennant Creek and an abandoned W class steam locomotive on the Silverton Tramway. The other drawback is the lack of an index. If you want to refer to a certain photograph you have to look through the book till you find it.

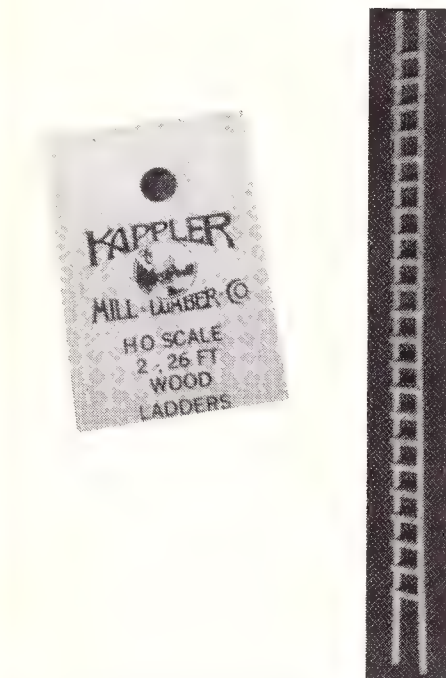
The photographs are sharp and the colour in most of them is good. The captions are adequate. Many of the photos are ideal for modellers for the detail and paint schemes are easy to see. I found the photos a source of information for lineside detail. Most of the photos set the subject in its surroundings. By this I mean that the locomotive, train etc. does not take up the whole photo, the surrounding landscape is also visible.

The book is expensive but is a valuable addition to any enthusiasts's library.

Stuart Livesey

Evergreen Strip Styrene. Sample supplied by McBees Hobby Centre, PO Box 144, Coburg 3058. Price: \$1.55 per pack.

Scratchbuilders are continually seeking new base materials from which to build models, but the availability of polystyrene sheet in recent years has satisfied many. Styrene is a plastic product that is easy to cut, score, join and paint and, as such, is an ideal modelling medium. Many articles have been written in this magazine using styrene showing how versatile the material is. One problem for some modellers is not actually cutting the styrene, but cutting a number of pieces the same size for, in most modelling processes, there is a need for large lengths of similar sized materials. The strip styrene packaged by Evergreen Scale Models overcomes this problem, for the range is so large there is no need to cut much for fine detail work. The range available is printed on page 8 of the November/December issue, the sizes being packaged in Imperial HO scale size. Each package has a number of strips, this number varying



Timber ladders by Kappler Mill Lumber Co, in 'HO' scale. Sample supplied by McBees Hobby Centre, PO Box 144, Coburg, 3058. Price: \$1.40.

When adding scenery around the layout the difference between good scenery and well detailed scenery is the amount of associated paraphernalia that can be realistically added; things like empty drums, stacks of wood for the fire, old corrugated iron off the roof, etc, etc. Ladders are used in most areas of life, especially around the house, farm, factory, loco shed, building site, and can even be used as a freight load, for the ladder, like every other commodity, has to be transported from the manufacturer to the user. There are many types of ladders; step, extension and fixed are but a few names used to describe some of the types. The Kappler timber 26' ladder is of fixed length, and represents the style of ladder used in days gone by, in that the rungs are added to one edge of the side stringers — something like the general handyman (farmer) would make for himself. The ladders (there are two to a pack) are 100 mm long and 5 mm wide. The 22 rungs are fixed 3 mm apart, the rungs being formed of 0.9 mm x 0.25 mm timber and are bonded to 0.8 mm x 0.6 mm stringers. The stringers and the rungs need trimming for final effect before staining or weathering. The timber is top quality, fine grained and lacks any evidence of fluff.

The feature of the ladder over others on the market is the appeal of the rungs fitted to the outside. A fine detail product.

Bob Gallagher

NSWGR C30 class Locomotive, in HO scale. Imported by Berg's Hobbies, 223 Church St, Parramatta, NSW. Price: \$195.00

In the latter half of 1974 we were gifted with the release of the NSWGR C30 class tank loco from Berg's Hobbies. The model met with mixed feelings in regard to its accuracy.

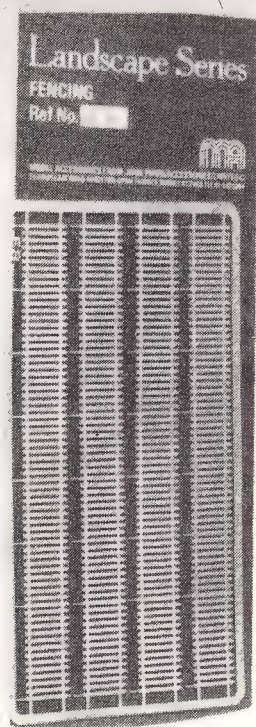
Berg's Hobbies has now seen fit to re-release this model, heavily modified. To say "re-release" is not really correct because the model now presented is a total re-build, apparently by a different Japanese manufacturer.

Whilst preparing for his previous model, the C30T,

with the size of the strip. The styrene used appears to be top quality, and is very workable. The rear of the label is inundated with suggestions toward better modelling which most modellers would benefit from.

It is good to see this product made available in Australia.

Bob Gallagher.



Fencing in the Landscape Series by John Piper. Samples supplied by Fybren Models, PO Box 88, Ivanhoe, Victoria.

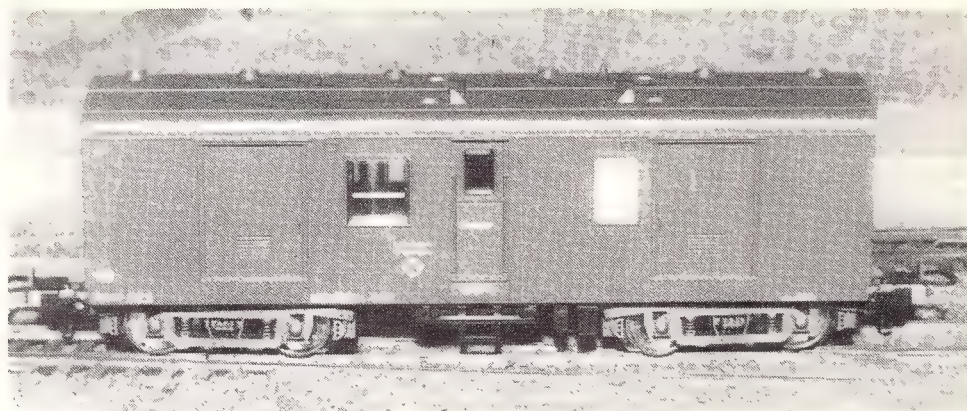
The John Piper organisation, from the United Kingdom, have made quite an impression on the scenery market in that they always seem to produce a quality product. The items under review are fencing, and the sections of fence are supplied in a plastic package, strengthened by a section of stiff card. The range supplies mostly 'N' & 'OO' fences, but the final application is up to the modeller, where HO modellers can use the 'OO' scale fencing and also the 'N' scale fencing as garden separators.

The fences are made by the photo-etching method, and the sections are still attached to a retaining border but can be separated by a sharp knife, although it would be better to paint (air-brush) them first. The etchings are clean and free from any blemishes. Available in the range is 7' security fence in 'N' & 'OO', 4' cast iron railing in 'N' & 'OO', 3'6" 5 bar iron hurdle in 'N' & 'OO', 3'6" picket in 'N' & 'OO', and 3'6" split chestnut in 'N' & 'OO'. The samples reviewed included the security, picket and split chestnut fencing and all had the appearance of fencing, especially the 'bent' sections in the split chestnut fence. The fences are formed out of 0.10 mm material that would need careful installation and hidden strengthening to avoid damage during the life of the layout. The fences would not look out of place around residences or the farmers house. A fine quality product, especially aimed at the modeller with high standards.

Bob Gallagher

VR 'PL' carriage bogie kit in HO scale. Sample supplied by McBees Hobby Centre, PO Box 144, Coburg 3058. Price: \$3.95 set.

Correct bogies under a coach is a beautiful sight for those who are aware of the correct units, and now that they are available, VR modellers no longer have an excuse for not putting the correct bogies under the 'PL' series. Cast in metal the castings, as seen by the photograph, show detail as sharp and in fine section. The samples reviewed were clear of flash and any defects and were pre-drilled to accept pin-point



The two sides of the LIMA SAR '8300' brake van.

wheelsets. The bogie bolster is held in place by a lug on the rear of each side frame, epoxy glue securing it after wheels have been added. The detail is superb and the thickness of the casting realistic. A very nice addition to the market for the VR modeller.

Bob Gallagher.

SAR '8300' class brake van, in HO scale by LIMA. Sample supplied by Southern Models, Adelaide. Price: To be advised.

The 8300 class brakevans were placed in service by the SAR in several batches between 1947 and 1972. Lima's model represents No. 8327, one of the 1961-64 batch for broad gauge service, but all latter vehicles are essentially to the same design. Several 8300 class vans are now to be found on standard gauge and can be seen in NSW from time to time. They have two goods sections, a guard's compartment and a passenger compartment in the middle of the van seating six persons.

The sample reviewed can only be described as superb. It is reported that Lima regard the model as their best effort of 1979 and to my mind is undoubtedly their best model of an Australian prototype so far. No material inaccuracies could be found in the model's dimensions and detail; the colour scheme is an appropriate shade of brown. It is lettered in SAR style of earlier times, i.e. without the SAR emblem, and of course could now be lettered for ANR if one desires to be up-to-the-minute.

Detail includes tread plate under goods doors, riveting around windows, louvres and moulded-on handrails. The roof is fully detailed with all circular vents, periscope lookouts, radio antenna base and a resemblance of the stove exhaust flue, which could be further detailed by the fastidious modeller. The roof ribbing appears a little too prominent, but cannot be regarded as detracting from the overall standard.

Major underfloor detail is featured, and the particular style of bogie has been copied faithfully. Wheels are 11.5 mm diameter, NEM standard, and would look better painted black. Other wheel sets could be substituted once the problem of undersized (NMRA Standard) pin point axle has been overcome. Standard Lima couplers are fitted. The fitting of Kadee couplers will require a small basic

modification to the floor.

Vans of similar designs exist on the VR, WAGR as well as the CGP (passenger brake van) on the SAR. All could be converted from the base Lima '8300' van with varying degrees of difficulty. AMRM looks forward to receiving suitable contributions on such conversions for publishing in AMRM.

Finally, one cannot really fault the model, and Lima must be congratulated on the standard attained. We look forward to it continuing.

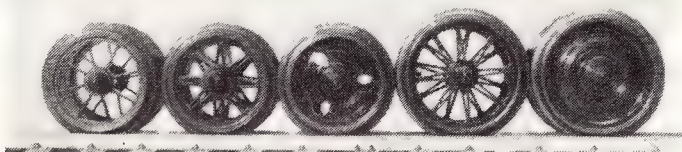
Graham Ahern

MAYGIB wheelsets in 16.5 mm gauge. Samples supplied by Fybren Models PO Box 88, Ivanhoe, Victoria 3079.

For some years now railway modellers, in their search for better operation, have seen a demand for high quality wheelsets. As all are aware the wheels that go under models should be able to roll very freely, but in the past very few would (until the Proto-Four crowd produced pin-point bearings (in the UK) and, with them, wheelsets). But unfortunately, not all of the wheelsets (although having pin point axles) were a satisfactory representation of a wheel. The rims were too thick, spokes unrealistic, and so on. For a while a few manufacturers produced what looked to be the beginning of a good range, but they seemed to fall by the wayside, or the product became unavailable in Australia.

The MAYGIB range of wheels were introduced to Australia by Fybren Models in early 1979 and, while many of the wheelsets are of little use to the Australian prototype modeller yet, they are of use to the many British modellers living in this fair land. The wheels are sold in a blister pack that includes two wheelsets (each wheelset having two wheels on an axle) and four brass bearings. The price is around \$1.50 and the range enormous, including 12 mm x 8 spoke, 12 mm x 8 split spoke, 12 mm x 3 hole disc, 14 mm x 8 slope, 14 mm x plain disc and more are to follow, including (we believe) 10.5 mm wheels plain disc and spoked for the Australian market.

The brass bearing is the same as sold under the Proto-Four setup and also under the MGW brand (which is great to see — standardisation), being 2 mm in diameter with a 3 mm locating boss on top. The



depth is 2.5mm and the bearing can be fitted by drilling out the axle box with a 5/64" drill and counter-sinking with a 1/8" drill. The bearing will usually hold itself in place, or a little Superglue will do the trick, after you are sure you have adequate side movement in the wheelset . . . about 0.1 mm.

The wheelsets consist of a steel pinpoint axle, 2 mm in diameter and 26 mm between pin points, the axle is finished with a chrome base. The wheel rims are turned out of brass stock and are chemically treated to give a dark brown/black appearance. The wheels are 2.5mm wide, have a tyre width of 1.7 mm (the rim is angled) and a flange depth of 0.9mm. The wheel rim is 1.4 mm thick. The wheel centres (disc and spoked) are made of plastic, which is tightly bonded to the tyre. The back to back measurement averages at 14.5 mm and this can be adjusted.

The wheels look realistic in appearance and, when correctly installed, run perfectly. What else could we ask for?

Bob Gallagher.

Berg's Model NSWPTC 'OCY' container wagon kit in HO scale. Sample supplied by Berg's Hobbies PO Box 527 Parramatta, 2150. Price: \$12.50.

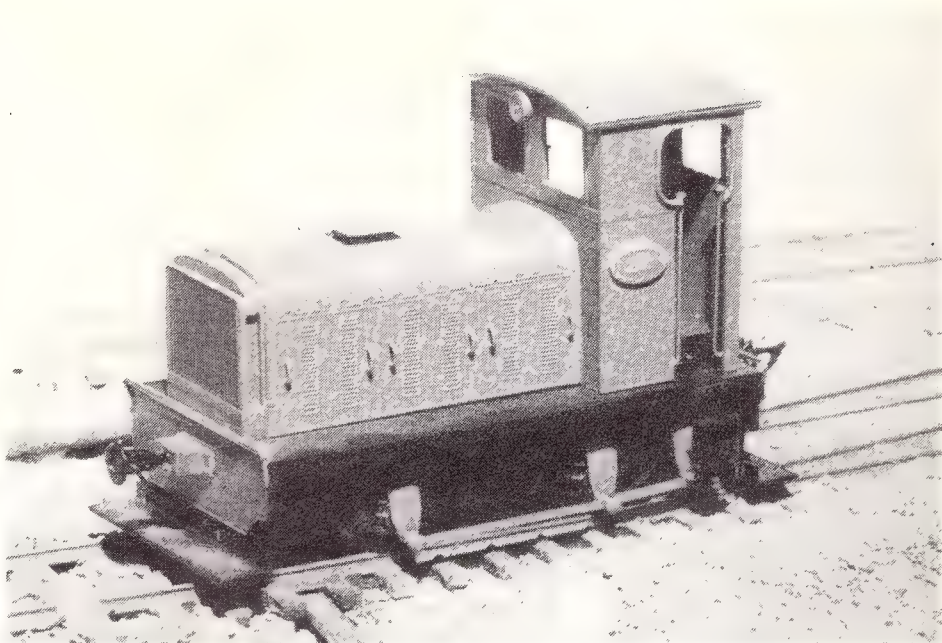
The 'OCY' is a 19.2 m container wagon, which was introduced to the NSW railway system to cater for the containerisation boom in the transport industry. As of July 1979 there were 467 of these vehicles in service on the NSWPTC system. Capable of carrying three 20' or one 40' and one 20' containers, with a total capacity of 52 tonnes, the vehicle is equipped with high-speed bogies and is limited to standard gauge useage. Although there are 467 units in service there are many variations in individual vehicles, for each manufacturer seemed to have made their batch of vehicles slightly different to the others. The kit under review is representative of the 120 units manufactured by Comeng Engineering, having road numbers 14901 to 14950 and 15001 to 15070.

Made in New Zealand by Scalecraft for Berg's Hobbies, the kit is presented in an attractive card box and all parts are protectively wrapped in fine paper or contained in a plastic bag. Most of the kit is low melt alloy castings, but the brakegear and steps are lost wax brass castings. Also supplied is a detailed instruction leaflet and a 'plan'. Bogies and couplers in the kit although the bogie bolster screws are included.

The body of the kit is cast in two sections, the join being across the middle of the wagon. The single (narrow) fishbelly underframe is also cast in two sections, again the join being across the middle of the wagon. Two lugs are used to retain the body sections together and level. The kit is easily assembled when the instructions sheet is followed (assembly time 2 hours), and all components are very clean and free of flash. Detail is sharp and well defined and the 'wells' in the deck are one reason why this model will run in an unloaded state. The other reason is, that due to the kit being 4 mm short in length and 2 mm short in width it is not possible to fit the recommended containers (not supplied) onto the wagon in the correct positions. The narrow width is such a problem that the lugs would overlap the side if the width of the containers were not reduced. (A hint . . . find and use the best looking undersized containers on the market).

The brakegear, on one side, is readily fixed in place, but the opposite side brake wheel needs a small bracket, which has to be manufactured by the kit assembler. The end sill, fishbelly underframe and storage bins again fix in place very easily. Bogies are fixed by drilling the body bolster and using the PK screws supplied. Missing from the kit is the air reservoir, but one of these (2' x 1') can be obtained from a CalScale 'UC' car brake set (Walthers No 190-300), assembled and affixed to the centre sill. The couplers, Kadee No 5, are to be glued in place and should be added after the model is painted.

While this kit has the appearance of a Craftsman kit (i.e. high quality) it is not difficult to assemble, and most modellers with one or two plastic kits 'under the belt' could readily assemble the 'OCY' and achieve a good completed model. It is not too heavy and would



suit any period from the early 1970's onward. It can be painted NSW black or blue, or now red. For good painting, after assembling the model, give it a wash with a mixture of water and detergent. (Until the paint is dry do not touch the model with bare fingers . . . use tweezers, etc.) When the water has dried apply a metal conditioner (Floquil is very good) and then paint, preferably by spray gun using first a zinc chromate primer before applying the final coat(s). Preparation for and painting must be done without the bogies and couplers attached. The reviewer chose to use Roundhouse roller bearing bogies until some others closer resembling the 2CM become available.

There is little doubt that this is one of the best 'metal cast' kits that has been introduced to the Australian market, but there are a few errors/omissions that should not be evident in a kit of this class. As mentioned there are discrepancies in length and width which are very important when a (predetermined in size) object has to sit in place on the deck; The air reservoir is missing; The steps supplied (lost wax castings) are too big and difficult to fix in place (Use MAC 4 mm wide ladder section); The 'plan' supplied with the instruction leaflet is not of the same style as the kit and can be misleading to the uninitiated; The method of joining the main section together is a little suspect and the kit under review did start to bow before it was painted; The end of the deck also lacked strength, and would not remain flat even after bending; The fishbelly underframe is not as thick as it should be, for if it had been thicker and the full length it would have supported the main section and stopped it from bowing.

Despite the above comments, it is a fine kit, as already claimed, one of the best of its type on the market, and as long as it is handled carefully it will be a fine model on any modern period layout. As assembled it represents the prototype admirably.

Bob Gallagher.

NZR Tr class rail shunting tractor — Sample supplied by Berg's Hobbies, Parramatta. Price not known but expected to be over \$100.

This is a model of Tr 22, one of the initial series of 0-4-0 rail shunting tractors built by the Drewry Car Co of the United Kingdom for the New Zealand Railways. Introduced between 1936 and 1940, these tractors originally had petrol engines of 70 hp but are now powered by GM diesel engines of about 100 hp. Shunting tractors now come in many varieties on the NZR and are widely used for light shunting duties.

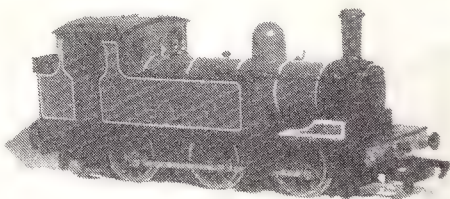
The model is handcrafted in brass (with cast radiator) and comes assembled and painted in NZR red with brass number plate. The model is nicely

made and features a can motor and working 'meat chopper' couplings (as used on many 3'6" gauge systems in Australia). The sample ran well, the pick-up system being quite effective for a four wheel model, and showed good hauling power.

Whilst constructed to Sn3½ scale, the prototype is of such diminutive size that the model does not look out of place alongside HO equipment. It measures 22'6" long, 8'9" wide and 13' high in HO scale.

An appealing little locomotive that could be used on an Australian layout or have narrow gauge applications, but perhaps rather expensive even for a handcrafted brass model.

Graham Ahern



Mainline J72 class locomotive — Sample supplied by Hobby Dynamics Pty Ltd, Price \$24.98.

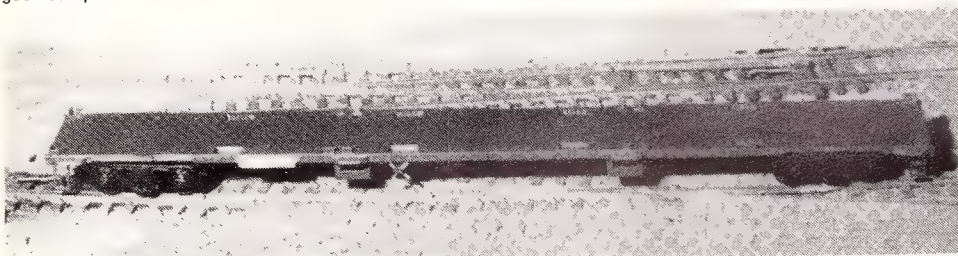
The J72 is a small 0-6-0 tank locomotive of which 113 were built between 1898 and 1951. The sample came in the green LNER livery, the model being based on one of ten locomotives built at Doncaster in 1925. The model is rather diminutive for 4 mm scale but is quite powerful for its size. An earlier pronounced thump in the mechanism now seems to have been eliminated and good low-speed performance was possible. The locomotive was badly in-gauge to NMRA standards but this can be rectified. Complete instructions on maintenance of the locomotive and a potted history are supplied and I found these quite handy.

The model is very well detailed with separate handrails with turned knobs and separate fittings for the whistle, water filler caps, etc. The articulated coupling rods are nice and fine and with good lining and lettering, it adds up to an impressive little locomotive for a British layout.

Graham Ahern

Powermaster controller. Sample supplied by the wholesaler, John Leeman, 3 Hattersley Street, Arncliffe, NSW. Price: \$29.95.

The Powermaster has been specially prepared for the market for use on Lima trains, the usual unit in the range not meeting Australian standards. It is housed in a 150x80 mm plastic case (black) and is supplied with a 5 ft cord and 240 volt power plug. Gaining power direct from the power point the controller drops the voltage to twelve volts and supplies both uncontrolled 12 volt AC at 0.3 amp and controlled 12 volt DC at 0.75 amp. Both power take-off points use screw terminals. A slide control throttle knob and a slide on/off switch make up the remainder of the panel-face which is clearly lettered on a yellow backing. Control circuitry is solid state and remarkably smooth. The control of both Lima and



Hornby models was remarkable, as was the double heading of 44's. The controller does not dampen the fast speed potential of the motors, although the top section of the throttle does not have to be used. The on/off switch is not a centre off type. Locomotives with can motors respond smoothly to the touch of the slide throttle, as do Pittman motored units.

For its price, size, and expectancies it is a very good controller, very suitable for the modeller with commercial models, and would also be at home on an 'operators' layout, although the full load current is not very high, thus limiting its use to HO models.

Bob Gallagher

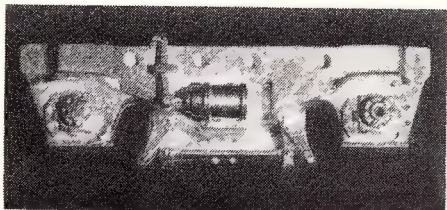


VR long axlebox for 4 wheelers in HO scale. Sample supplied by McBees Hobby Centre, PO Box 144, Coburg 3058. Price: \$1.20 for 4.

To the reviewer there is nothing better than a small branchline engine ambling along with a string of four wheelers in tow. A small number of four wheelers seem to give the train a greater length than half the same number of bogie wagons. Sure it is an illusion but then part of railway modelling is to create an illusion with small models.

With four wheelers in the past we have had to be content with making do with 'close enough' representations of axle boxes (as NSW modellers still have to), but the range now sold by McBees has given the VR modeller the opportunity to build VR models with a little more accuracy, and the axlebox under review has no peer in character for it is the long spring version that can be found under the ever present 'Z' van and under some 'T' vans. (See 'T' van article in past issue of AMRM). The metal casting has a cast-on mounting lug at the rear and is clean of flash. The springs are a little light-on in detail but serve the purpose, and the journal is of sufficient size to accept the MGW/MayGib brass bearing. The length of the spring is 4'6" and the mounting bracket is nicely shaped and detailed. The dimension between the top of the spring hanger and the top of the mounting flange is 3mm. The centre of the axle journal is clearly marked and can be enlarged to accept the brass bearing by drilling out with a 5/64" drill held in a pin vice. The sample reviewed was not cast as neatly as could be expected but the quality in castings can vary, and it is usually up to the purchaser to ensure that the items purchased are correct; if not send them back for replacements, for the poor quality casting has probably slipped through the good quality control used by McBees and the casting can be melted back for reuse. A welcome addition to the growing VR modelling scene.

Bob Gallagher.



VR 'T' class diesel bogie sideframes in HO scale. Sample supplied by McBees Hobby Centre, PO Box 144, Coburg 3058. Price \$3.95.

These metal castings of the VR 'T' class diesel bogie sideframes are designed to directly replace the sideframes on the Athearn SW-1500 (cow or calf) or S-12 diesel mechanism. The samples reviewed needed no cleaning-up and were neatly drilled to fit the brass bearing that has to be recovered from the Athearn side frame (or purchased from McBees). Detail of the casting is neat and crisp and the rear of the casting is shaped to form the fixing rivet, to secure it to the Athearn mechanism. Accompanying the castings is a very well detailed and illustrated instruction sheet showing how to put the sideframes onto the Athearn mechanism. There is also a few hints on which series of 'T' class to extend the chassis.

This is a first class modification kit and it is great to make it known that it is Australian made for Australian models.

Bob Gallagher.



Cardboard model of NSWGR MLV. Our sample supplied by the manufacturer, Kard Kits — Toorooka, NSW 2400. Price: \$2.40.

Photographs published in overseas magazines of models constructed entirely from card have, for years, interested me greatly as they always seem to be class models. Many early American modellers built exclusively from card. So when I was given this kit to review I took the opportunity to construct in a little used material.

The kit consists of a sheet of paper on which is printed an excellent coloured scale drawing (HO) of an MLV louver van. A thicker backing sheet of cardboard is included. Both are footcap size and come in an attractively sealed plastic bag. Concise easy to follow instructions are included.

Basically the construction of the kit is as follows: glue the printed sheet to the backing card, this is then left overnight to dry flat. The model is assembled by carefully folding the cut out shape to form a box. Construction is simple and quick providing the instructions are followed.

A sharp knife, straight edge and PVA glue are the only tools needed. Construction took me about 1½ hours to complete the cardboard box. Once assembled the card box is surprisingly strong and scales the correct length and width for the particular MLV series modelled.

Not included in the kit are bogies and couplers or the fish-belly underframe unique to this MLV series. No mention is made as to how it can be constructed in the instructions. An underframe can be quickly made from timber or styrene.

Although the kit needs added construction and extras to complete it it is a further welcome addition to the Australian kits now available. A modeller can construct a worthwhile model from this kit with little financial outlay.

The use of card for rollingstock seems to be very limited and could be better suited to structures.

Ian Thorpe

Evergreen Scale Models Clapboard Siding, and Scribed Styrene Sheet. Our samples supplied by McBees Hobby Centre, 535 Plenty Road, East Preston, Vic. Prices: \$2.95 and \$2.45 respectively.

Evergreen Scale Models is a relatively new American company which specialises in, inter alia, styrene building materials. The range is extensive and covers plain sheets, different styles of scribed sidings, and a large range of dimensional strips. Each sheet is packed in a see-through plastic bag which contains a label showing the contents' size in all gauges. The prices are not cheap, but if it's quality you want it's quality you get.

The two samples under review are (a) 4 3/4" clapboard siding, and (b) 5 1/4" scribed siding. Each sheet is 268 mm long by 160 mm wide (10 1/2" x 6 1/4"). This size appears to be standard throughout the range. The clapboard sheet is .040" thick and the scribed is .020". To the uninitiated, clapboard is a series of boards running lengthways along the side of a building, and each board overlaps at its bottom the board immediately below it — sort of like a roofing tile overlap.

Both sheets are extremely well defined. The scribing appears to be a very fine U channel, rather than the more easier V groove. The material cuts easily with a good craft knife and glues with conventional styrene glue (tube glues or MEK based liquids).

The range is extensive — for instance the abovementioned sheets can be obtained in either wider or narrower spacings.

As stated, it is not cheap, but it is quality, and quality can make a good model just that little bit better.

Allan Brown

Auto Pulse controller AP 7000:mk11 by Tempest Electronics, 33 Borg St, Scoresby 3179 who also supplied the sample. Price: \$39.95.



The AP7000:mk11 is a redesigned version of the original AP7000 unit. The manufacturer claims the improvements are designed for better operation. Under test, using a 12 volt DC supply, the controller appeared to meet the manufacturers' claims, although it is necessary for the operator to spend some time 'getting to know' the controller. Basically it is a panel type controller that requires mounting into a panel. The power to supply the unit MUST be a 12 volt Direct Current supply, and it is recommended that the power supply be separate from any other control or point motor control. (One must wonder why the AP7000:mk11 does not have its own bridge rectifier included in the controller circuit, for this does remove the possibility of most stray electrical interferences that can get into layout wiring.) Connection of the AP7000:mk11 to the layout is via four leads and should be soldered. Full directions for connection and installation (into the control panel) is included on the information sheet/Guarantee (2 year) sheet that accompanies the controller.

The controller has two control knobs, a switch for forward/reverse, a light emitting diode for 'short-circuit' indication and two adjustment apertures for finer control. The main knobs are for throttle (left unit) the other being the brake mode. It is possible to use the throttle normally by setting the brake mode to 'D' for direct, but it is also possible to switch from direct control to inertia control during normal control of a train without any interference to the train. Other stops on the brake mode are 'S' for stop, 'QS' for quick stop and 'E' for emergency. Until full understanding of the controller is attained the 'E' stop is continually used. The forward and reverse switch is not of the centre-off variety and, as such, a nuisance, especially when there is a need for a 'Panic Stop', for the emergency stop has a locomotive overrun of three to four inches.

Basic control of the AP7000:mk11 is superb, with the inertia take-off working smoothly over a large range of commercial and specialist motors (Lima, Hornby, Berg, MWO05 and K's motors were used.) There did not appear to be any pulsating from the locos although in some instances there was a definite drop in pulling power. For correct control there is also a need for positively clean track and wheels.

A nice controller, well presented, and well suited for the proprietary modeller who wishes to slow down the normally fast locomotive and have control of the unit over the full range of the throttle knob.

Bob Gallagher

HO (OO) scale sleepers by Railcraft. Samples supplied by Aspect Models, 9 McGregor St, Canterbury 3126. Price: \$4.90 per 1000.

Sleepers are used, generally, as a base with which to hold the track down. Modellers who hand lay track find them essential but generally have had to cut and stain their own. The Railcraft sleeper, cut from fine grain timber, is pre-stained (grey/black) to match the flex track sleepers. They are 29.5 mm long, 2.4 mm wide and 1.8 mm thick. They do not split during spiking, when Railcraft spikes are used. For the demanding NSW modeller they are only one scale inch (on average) narrower than NSW sleepers.

A product that is right for the job, and need not be covered by ballast because they are too coarse. Very nice as a side line pile as well.

Bob Gallagher.

CONVENTION

The HOBSON'S BAY Convention is planned for Easter 1981, being held in Melbourne. To find out more details get on the mailing list by writing to Hobson's Bay Convention, PO Box 105, Vermont 3133, Victoria, Australia.

MAIL BAG

Sir,

My interest in model railways is somewhat diverse, since I model the SAR in HO, British style N gauge, and also collect vintage O gauge tinplate, mainly Hornby. I also have a considerable collection of Australian made O gauge trains (Ferris, Robilt, Maurlyn, Munro etc). While there has been many articles published in the model railway press dealing with the collecting of vintage Hornby tinplate, I have never seen anything written about our own Australian made equivalents. I would like to rectify this, by compiling an article, hopefully, for eventual publication in AMRM. However, in order to do this, I will need more details, particularly any information any readers may have as to where the above mentioned firms were located, the dates of commencement and cessation of business, and the extent of the range of models made by these firms, in fact any information relative to the proposed article would be greatly appreciated, and I am prepared to reply personally to anyone who may care to write to me with information or who just has a mutual interest and would like to correspond.

Robin Millstead,
21 Homburg Drive,
Murray Bridge, SA, 5253.
tel (085) 32-3392.

A Christmas Card

To,

The hardworking people of the AMRM staff, as a token of thanks from Aust. Model Railwayers all over Australia.

In view of your relentless devotion to the hobby, you have done a magnificent job in putting out a magazine that all 'us Australian modellers' can identify with. It is a beautiful piece of work and deserves many thanks indeed.

This card is written by one person, though that one person conveys the feelings of all your readers.

The magazine compares easily equal with any foreign magazines and is less costly and, overall, a better buy.

The beautiful drawings and photographs especially deserve much award and praise, and the people who put out this magazine must be very, very special indeed, to devote so much time and effort towards us all.

Thanks.

Yours Very Respectfully,
Myself and the Modellers of Australia.
P.C.D.

The above came to us on a Christmas Card and is reprinted here so that the many staff members of AMRM spread around Australia can read the sentiments of our readers. Ed.

Sir,

I would like to make a few points about the comment in the July/August 1978 issue of AMRM. The author, Roger Johnson, in the last paragraph said "use the home product whenever possible. Today's backyard industry may not be there tomorrow."

I feel that this comment has been made without thought and without the good of the hobby at heart.

The MRC/Friedmont kits and PMH bogies are a disgrace to Australians. The former are coarse, poorly made, unrealistic and just plain amateurish. The PMH bogies have detail which is second-rate and no rollability. The underframes suffer from the same symptoms as the bogies and have no bonding qualities.

The quality of the MRC/Friedmont kits leave much to be desired. They are full of air bubbles, have very little detail (if any), castings are tacky and do nothing to promote the hobby. Air bubbles make the finished model look about third rate. The frosted windows (in passenger cars and brake vans) do little to improve this third rating. To make the vehicle look like the prototype a lot of work must be done. These kits come without roof or underfloor detail and this requires the modeller to buy it. Thus you end up with a third rate kit which costs a fortune.

These kits do little to promote the hobby and are possibly a contributing factor to why we are referred to as grown men playing trains, eccentrics, etc, etc.

I am not saying that all Australian kits are poor but some are. Workshop 5 (Railkits Australia) have proven that kits of high quality can be produced in Australia. The bogies for the 'CR' and 'FR' kits are an incalculable improvement on the PMH.

The hobby would take on a higher standard if the modellers were to start questioning the quality of the kits they purchased and if these manufacturers gave customer satisfaction and value for money.

Mark Hendy,
Riverwood. 2210.

It is quite possible that Mark Hendy has given little thought to the "support the home made product" theme as an overall aspect and let a phobia for a few manufacturers blur his view to the hobby in general.

The Australian prototype modelling hobby has, for many years, been purely a scratchbuilder's area until a few keen modellers, not necessarily inundated with talent, produced a number of parts that saved modellers a lot of time and effort. While the parts were not as good as the overseas equivalents, they were of Australian trains, and the negative aspects were overlooked. The manufacturers, gaining confidence with the enthusiasm for their products, enlarged the range, while also improving the product (for there is nothing to beat experience for better quality products), and as more products came on the market a few more manufacturers joined the field, some importing from overseas, others using local materials and skilled labour. Gradually the demand for the Australian prototype model grew to a point where a big multi-national company saw fit to produce Australian profile models, some not very accurate, but they were aimed at the Australian market.

The point being sought is that the Australian scene reached its current point because modellers (modelling Australian prototype) purchased the models available (despite the deficiencies) and proved that there was a market for Australian profile models. Big companies will not put many thousands of dollars into a project on the off-chance that they will sell. They have to be sure they will sell, even if they are a little inaccurate.

Sure, there are poor models around, but it is a little unfair to suggest that ALL the said products under the brand label are poor. We as potential customers, have the right to express our dissatisfaction with a product by not purchasing it. Some modellers obviously do not agree with Mark Hendy, for not only do they buy some MRC/Friedmont kits but they then copy them and resell the copies to other associates at a much reduced price. The point also overlooked is that there are some products on the market aimed at the modeller who is starting out, and as such does not have a high standard (initially) and can gain tremendous experience from assembling these models. As good as Workshop 5 Models are (and they are no longer made in Australia) they are not easy to assemble and a good accurate model is only possible if the modeller has the capabilities (or experience) to make a good job of it.

Be critical of a product, have a high standard and be selective in your buying, but be aware that if a majority of us refrain too much from purchasing products, there will not be any products to buy. (Editor).

Sir,

As an avid reader of AMRM since conception may I take this opportunity to wish the management and staff, past and present, all the best for the future and thanks for the past.

I have an enjoyed every copy and can see No. 100 leading us into a brighter future. Over the years I have said my five cents worth through the magazine and have enjoyed many friends' company from first meeting via the magazine. Therefore I take much pleasure in recommending this magazine to new people within the hobby.

Ellis W. Thornley,
Elanora Heights.

Sir,

Layout standards at exhibitions.

If Mr Comerford (MailBag Nov/Dec 1979) had his way, the only layouts the public would see at an exhibition would be those that are complete, i.e. layouts requiring no further work to be done to them.

The Mont Valley Modelling Group (of which I am a member) at its exhibitions ensures that not all the layouts to be displayed are completed. Visitors to our next exhibition, to be held later this year, will see a

large number of layouts varying in scale and the stage of completion reached.

We have found that the public are not only interested in what a completed layout looks like but also in how a layout is built.

In closing I would like to congratulate those people involved in producing the magazine on making it to the 100th issue. Well done!

Martin Murden,
Macleod 3085.

It would be very interesting to see how many exhibition layouts are really completed, ever, and if the not-completed not-exhibited formula was applied, how many layouts we would see. The Menangle layout and the Bargo layout would be at least two that are not completed, yet. And now to appoint a referee to decide what is a completed layout, for one of the good aspects of this hobby is being able to change things, which does happen to exhibition layouts.

Maybe exhibition layouts, completed or not, should be exhibited in a style that will inform the public of 'the present state of affairs' and this would mean well presented signs detailing what is being aimed for and showing the method of approach. (Editor).

Sir,

Just a short note to say congratulations. 100 not out — it's a pity we don't have any batsmen these days who could score as well; but seriously to Gallagher, Brown and company, THANKS! Your hard work and professionalism has turned this into a truly first class magazine.

Two things I would like to see are: (i) An explanation of how the magazine came into being and some ideas of the difficulties involved in producing it; (ii) With the apparent recent upsurge of interest in Australian modelling perhaps it is time to have a starter series on modelling each state railway system(s) covering: track gauge considerations, obtaining suitable wheels, bogies, underframes and couplers and the modification of commercial engines and rolling stock. Also information available and where to get it. Perhaps one per system per issue.

Bob Comerford,
Canberra, ACT.

Thank you for your kind remarks. The cricket followers on the staff are a little pleased that Australia does not have any batsmen capable of keeping up with our score, 100 in seventeen years... wow. On the other point AMRM staff are working on articles to enlighten readers on some of the questions and we thank you, Bob, for offering to write the article on modelling the NSWGR. (Editor).

Sir,

It is my contention that modellers of Canadian prototypes (Canadian National and Canadian Pacific) suffer the greatest in regard to model accuracy since they have no model railway magazine devoted to the domestic modelling scene.

Manufacturers who produce such models are marketing for the United States and not for the Canadian modeller. Models are produced for American prototypes and, in an attempt to appease their colleagues up north, repaint the same models in Canadian colours.

Whilst the issue of repaints has long been the thorn in the side of the Australian prototype modeller, it is the sword in the heart of the Canadian modeller. Australia has at least come to terms with the problem, even though the problem has not been exterminated. In Canada there are all the problems still in existence.

An interesting analysis can be made concerning the situations in Australia and in Canada. Australia has its own model railway magazine (AMRM) but Canada has no such publication. You may well groan, but the fact remains that since the AMRM came into the hobby, the local scene has been encouraged to grow and expand (even though it has been limited to the New South Wales and Victorian scene). This is because a magazine dealing with the domestic system can determine what the needs of the Australian modeller are. The Canadian modeller does not have the means in this regard.

Canadian modellers have only the American magazines at their disposal and thus the voice for Canadian prototypes is muffled if not heard at all. The American magazines cater for the interests of the American and not for the Canadian.

The situation is further highlighted when it is recognised that the American prototype modeller has had a large availability of models for some

considerable amount of time. The growth of the domestic prototype shows a marked correlation with its magazine publications. Despite Canada lying just north of the border nothing has been accomplished (except for Juneco kits). Even though brass models of Canadian prototypes have been produced, this still has not altered the plight of the Canadian modeller. In Australia, brass models are also available yet the situation is not the same.

Australia is not the only country who has to suffer the indignation of repaints as Canada bears witness to. The giant steps that have occurred in our local scene since the inception of AMRM is clearly seen. Canada has shown us that the model press can have a large influence on domestic model production — the fact that Canada has none while Australia does will make any subscriber see the benefits.

One wonders whether the modeller of New Zealand or South African prototypes suffers the same fate as well.

*Bradley Hinton,
Wahroonga 2076*

P.S. Congratulations to the staff of AMRM for reaching the centenary issue. Let's hope that the next one hundred issues can contribute as much as the previous one hundred to the modeller of Australian prototype.

Sir,

Having just received the latest issue of AMRM (Nov/Dec 1979), I felt compelled to reply to J. Goodman's letter in this latest issue.

I feel that he is wrong about the inclusion of prototype articles. I am sure others as well as myself, would feel this way for the following reasons.

1. As a relative newcomer to the hobby, I am interested in how the prototype operates, so I can apply this to my model railway operations.

2. For realism on your layout, one should consider

not only the locomotives and rolling-stock, but the area through which your trains and consists pass; as well as the operations you could undertake for realism.

3. It could be quite a boring magazine if only technical modelling articles appeared.

4. Most of us are interested in model railways, because we are interested in prototype railways as well.

5. It is interesting to read new ideas and of others interests in the hobby. After all, AMRM is a medium for peoples' ideas and opinions (including J. Goodman's).

6. Not all articles will appeal to every modeller, but there is no need for us to be narrow in our thoughts on modelling. We should try to read all articles, because you can usually pick up something useful. We should be exposed to as many ideas and opinions in our hobby as possible, and this should make us a much better all-round and informed modeller.

7. Finally, we are aspiring to be good railway modellers and how can we achieve good results without examining the prototype?

Many thanks for the enjoyment and knowledge I have gained in the relatively short time I have been reading AMRM. Keep up the excellent work.

*Phil Flynn,
Murwillumbah 2484*

P.S. I have been very much enjoying Leon Oberg's photography articles. This has made me more interested in railway photography.

A.M.R.M.

A Short History

Continued from page 44

has achieved this point by some very hard work of a few willing hands. We should all be thankful for the effort given to produce a magazine that gives enjoyment to many.

So much for the present; but what of the future? There is no financial burden but there is a dearth of contributions by readers. Readers are the only individuals that can remedy this problem. The other main problem is that some members of the staff have been on the crew very actively for six years, longer than any previous member, and they must be getting tired and in need of a rest. But who will take their place? Again it must come from readers if this publication is to continue else the odds must be against it lasting another 100 issues.

The problem of course is that AMRM must continue if Australian prototype modelling is to continue. AMRM has been responsible for the hobby reaching the present stage, and must be around to help guide the future, through readers' contributions. AMRM is a mouthpiece for Australians — always has been and will continue to be, as long as readers and the SCMRA wish it to continue. The place AMRM holds in the hobby is one that all should be proud of, and one that we all should strive to keep.

AMRM NEWS

Well, after 17 years, Issue 100 of the Australian Model Railway Magazine has eventuated. At varying periods publication of the magazine came to a near halt, but the drive and tenacity of many modellers has seen the coming of age of an Australian publication we can all be proud of. An active magazine is the main ingredient for a growing hobby, and AMRM has throughout its life been the driving force behind the growth in interest in Australian trains as a modelling mode. We at AMRM thank all those who have assisted us in presenting Australia's premier model railway magazine.

Colour at Last

To celebrate 100 issues AMRM presents a flash of colour, showing some of the good Australian layouts that abound in this country. At present the colour spread is a once only attempt, but this must depend upon the final costing, and of course the response of our readers. For the record the five model shots on view were the work of three photographers who took over 100 exposures. We have printed the five best, but only have about six more that are of publishing standard. This does not detract from the ability of our photographers, for colour photography for publication is a very difficult task. If any readers have transparencies they feel are good enough to print, send them in, supplying all relevant details and of course a return address if you want the slides back. NOTE that they must be transparencies (ie 35mm slides).

Last Issue

No doubt most readers are aware that last issue was a little late, in fact seven days late but the Xmas rush would have held it up a little more. Unfortunately, there are many things that can and do hold up publication, and many are beyond our control. We do provide for some delay in our timing, but issue 99 beat all. As it was the only late issue for nearly five years we hope you will forgive us for the delay in your bi-monthly reading matter.

Reviews

We apologise for the dearth of reviews in recent issues, and now for the great influx of them in this issue. Unfortunately to adequately review many items we need modelling facilities and time, both of which have been unavailable in recent months due to domestic residence alterations at the AMRM office, resulting in no time for reviews (but plenty for swinging a paint brush. Ed.) and the modelling area covered in building materials and dust. Hopefully we have overcome the backlog and can now keep up with the demand.

There has been some comment that AMRM does not cover all products in the Review section, and this is not denied. We must, however, point out that we only review that which we receive or ask for, or if it is a special product and one of our staff has purchased it we share the good news with our readers. If readers feel we should be covering a wider range, and some specific products, write to the manufacturer/supplier and suggest that they send us some samples, for that is the only way we can conduct a review, by having the product in hand.

Meet Dick Stein



The above is a caricature of Dick, by himself, who has joined David Wearne on AMRM staff as a cartoonist. Dick is responsible for causing a couple of pair of wet pants when the editor and manager of this rag tried to make some sense of Dick's letters and his cartoons. We must point out that some of the cartoons are very topical, in that only model railroaders will understand them, but it is good to laugh at yourself, especially by those not in the hobby. We trust readers will enjoy Dick's work as we at AMRM have. (A sample of his work is printed below.)

Worth Reading

Modellers should always be on the lookout for reading matter that will assist them with their modelling. There are so many books and magazines on the market that it is impossible to read them all let alone buy them, but still we must be continually aware of any bit of information that will be of assistance to us in our hobby.

Import Hobbies produce a bi-monthly newsletter

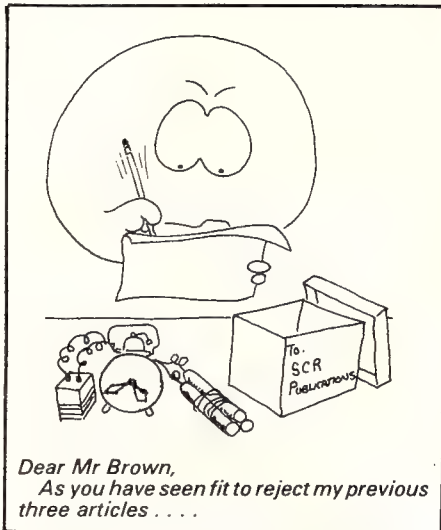
which basically covers the new products in stock at their shop. Subscription rate \$2 per year.

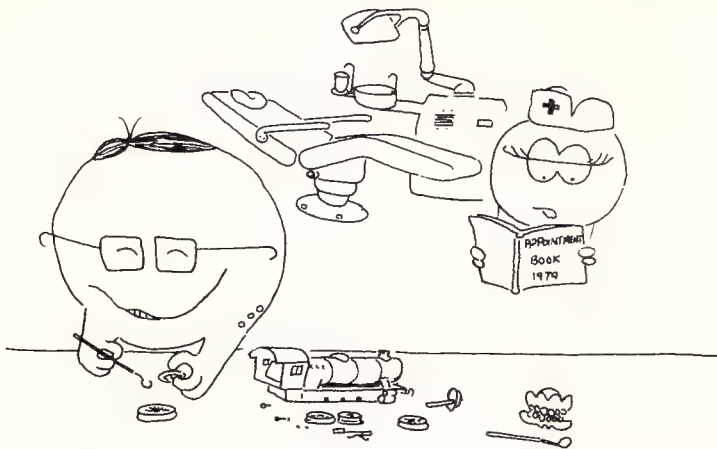
One old stalwart of the model railway hobby in Australia is the AMC Newsletter, which can be usually found (free) in stores that stock AMC products. There is usually an article or two that broaches new ground.

A very informative newsletter is published every now and again by McBees Hobby Centre. The single page sheet is so up to date with product news that it seems to continually pre-empt the news sections in Railroader and Craftsman. One problem, to be a subscriber you have to be a customer of McBees.

A very interesting article is published in the October 1979 issue of Railroad Model Craftsman, and covers the conversion of Classic Miniatures general store kit into two structures. The best aspect of the article is that it could be used on any Australian prototype layout, for the Classic Miniatures general store kit has the outline of many Australian shops, that are still in existence in the country area today. Also in the same issue is an interesting article on Autumn trees.

On the theme of structures the November 1979 issue of Model Railroader also features a kitbashing article on converting houses (American style) from some rather common building kits. Although the structures are American based some of them would be suitable in an Australian setting. There is also the first of two articles that covers a HO N2½ layout of





"You certainly have gotten a lot of work done on your railway today Mr Stein. Mr Stainer didn't come in — or Mr Gooch — or Mr Whale. I wonder if we will have any luck with Mr Gresley or Mr Maunsell?"

incredible magnitude. One photograph features a model of a VR 'NA' class (Puffing Billy), in action.

Articles

Despite a few appeals recently we are really in need of articles, in fact we could even change the name of AMRM soon by dropping the MODEL title for we have very few MODEL articles. The articles we have on hand and are working on somehow or other all seem to be of NSW origin and mostly diesels. To continue our high standard we need the material to publish. Even if the article is not typewritten or your English is a little crook (you would be among friends, Ed.) do not worry for we can help whip your article into shape. Articles from non AMRM staff tend to inject a new interest into AMRM. So please help.

Bravo George — BRAVO

From time to time this publication has been very critical of many of the products that have come from the Berg's Hobbies stable. Detail, workmanship, accuracy and price have been among many criticisms, but we must take off our hat and praise George Berg for his foresight in arranging his latest acquisition — the NSW Suburban Station Kit — which must go down as the most exciting product to hit the Australian scene in 1979. AMRM has been informed that more kits are planned if sales go as expected (the kits can be found in any store that stocks AMRI products) — a signal box and a goods shed are just two mentioned.

Modellers, however, do play a small part in the overall plan in that they must be interested in the product, and show that interest by purchasing it. It is pointless waiting a few years until you can fit it into your programme for, unless there is an obvious demand for the product in the immediate future, the entrepreneur must conclude that the Australian modellers are not interested in models of this magnitude. We have the opportunity of taking a giant step in our hobby. Let us not be hesitant.

Once again George Berg, thank you for a fine product.

Commercial News

1979 was a quiet year for products aimed at the Australian market (well at least the early part of 1979 was quiet), but the scene was flooded with fine models as the year drew to a close. VR freight,

passenger, tender and diesel bogies came to us from McBees Hobbies and the beautiful VR plan books (2) came to us via the Victorian Model Railway Society (thank you Frank Kelly). A few Workshop Five kits floated onto the scene from across the seas, along with MRC's TAM cars, FSM's D53 and Wampu tender, Berg's Hobbies C30 class (rerun) OCY and LLV kit and the passenger station kit, Lima's Indian Pacific power car and the release of Kard Kits MLV kit aimed at the junior modeller.

1980 offers both bad and good news for the railway modeller. The bad news is that things will cost more. An increase in duty will make items from the UK dearer, and the ever increasing cost of oil will make plastic a much more expensive raw material; therefore, the price of most models will increase.

On the good side, however, the year looks promising for the Australian prototype modeller. Berg's Hobbies are expecting some plastic injection moulded passenger car kits of the FS and BS steel coaches (NSWGR). FSM is working on a South Maitland Railways 10 class locomotive kit in HO scale. We have also seen the masters for a new range of HO epoxy kits, and if the standard of the mould detail is effectively reproduced NSWGR modellers will have some very well detailed guard vans to put on the track. The first kit is the GHG van. We also believe that HORNBY are to repaint the VR 'Z' van in a more correct red livery.

1980 promises to be a good year for LIMA, with all the long awaited Australian items expected to appear. The 8300 class guards van of the SAR/ANR is due by the time this issue appears, and a review of the model appears herein. Towards the middle of the year the GM12/42/S classes are expected, with a completely new body. About September the NSW coaches should be ready, and about the end of the year the VR/SAR 'ELX' class open wagon is expected.

In addition it is planned to repaint the Indian Pacific power van in 'Overland' colours, and the bogie car carrier (from the Japanese range) into Australian colours. These developments augur well for the future production of Australian prototype models by LIMA, provided the necessary support by modellers is forthcoming.

Some Sydney based modellers were rather fortunate recently by being in the right place at the

right time, for they received the benefit of a rather involved project. A modeller, wishing to make a NSWGR Z26 class locomotive decided to use the chemical etching process to produce some of the body sections. To help defray costs he made a few extra units and packed them as kits, the standard of which for experienced scratchbuilders, was rather high. The etching process produced the rivets, as well as the builder's plate. Hopefully, some more of these kits will be produced and made available to AMRM readers. It should be pointed out that soldering is one of the attributes needed to assemble the kit.

Cavalcade wheels have advised that, while their wheelsets will not be going off the market, they will not be available through hobby shops, due to the low (financial) return and the small number of shops willing to stock the wheels. We at AMRM wonder what is wrong with local traders.

SARMODS have released a culvert set and an SAR water tower which, although both are based on SAR prototype, would find a place on most detailed layouts. All we now need is a lot more Workshop Five kits and a good run of MRC and Friedmont models as well as some more brass locomotives to make 1980 a good year for modellers.

Credit where credit is due.

Regular readers will be well aware that last issue we were (in AMRM NEWS) a little critical of LIMA and the roof detail (or lack thereof) of the Indian Pacific power car. Well, this issue we have to congratulate LIMA for the modelling and detail accuracy of the SAR 8300 guards van. Without wishing to be repetitious it is as accurate as one could wish for. Photographs illustrate the prototype and the model. Thank you LIMA: a job well done. We are particularly happy to see the final results of this model for it was the first model that AMRM staff recommended and fully researched for LIMA. Phil Curnow provided the basic research material which provided for an accurate project.

We now look to readers to justify the faith of AMRM staff in the project in overall sales of the model. It is essential for the manufacturer to see appropriate sales figures to ensure a continuing interest in Australian models.

No Duplication Please

With the added participation by new manufacturers (to the Australian profile) to the hobby we appeal, on behalf of ALL AMRM readers and Australian modellers to refrain from producing models of identical outline that are already either on the market or being produced. We at AMRM will assist in any way possible to ensure that no duplication occurs, and will confidentially listen and advise any budding manufacturer/importer as to whether the model he is considering is on the drawing board or not. There is plenty of scope for many to share in the Australian profile market, and trade competition can be achieved without duplication. Co-operation, to eliminate duplication cannot be regarded as compromise, under any circumstance.

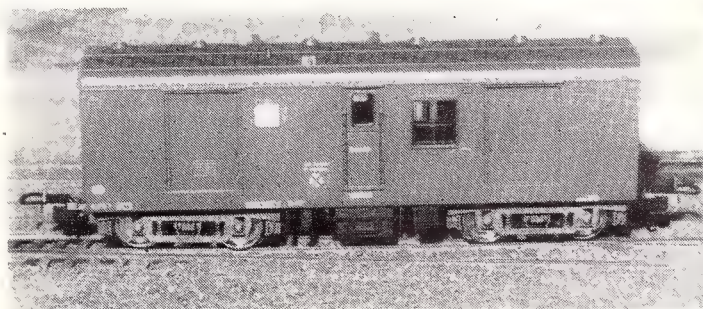
Meet Norm Read

In selecting someone to write this issue's Comment one name automatically came to mind — Norm Read.

Norm is well known to most modellers, and is one of the "gentlemen" of Australian railway modelling. Along with his colleague, Col Shepherd, and their large 'O' scale exhibition layout, he has contributed greatly in the overall encouragement of local prototype modelling.

Now retired, he is still an active member of most clubs and associations around Sydney — the

The photographs below and below right show the model and the prototype, i.e. LIMA's HO scale '8300' brake van and the SAR '8300' brake van.



advantages of being a bachelor. He has held the position of Federal Secretary of the Australian Model Railway Association for some 10 years or so. He is also one of the founding members of the Sydney Model Railway Society.

I dare say that not many of us can recollect just when we first met Norm. It seems that, over the years, he has "always been around". One only had to go to an exhibition or a local train meeting and there was Norm, always an integral part of the proceedings. The thing that irks me though is that he never ages.

I think that there is something we can all learn from Norm; if not modelling methods then it must surely be temperament.

Subscription Problems

Unfortunately the change to computer addressing has not been as effective as expected, for many subscribers did not bother returning their renewal forms in time for the correct programming arrangements. This is costly, both in time and money, and the subscriber also misses an issue. For the system to work efficiently all concerned must do their bit else we will be compelled to resort to an alternative method.

A New Award

The Prawn of the Year Award must certainly go to the well known Sydney modeller who hand-painted a custom brass locomotive. The end result looked as though he had used a 6" brush the morning after the night before. To make matters worse he numbered it with the same brush. No names mentioned, and this esteemed reporter will now go into hiding — like permanent.

A New Era.

As we venture into the 1980's we, as railway modellers, approach a new scene as far as modelling the modern Australian Railway Systems is concerned. Looking ahead it is very easy to see that modern era modellers will be participating in a scene rather different than any other period modelled in Australian history, for improved engineering techniques and energy efficient motive power, coupled with reorganised administration will present a different appearance to enthusiasts and modellers alike. Naturally each system will differ, still having

their own distinctive characteristics but a casual look at what is to come is exciting or disappointing according to one's outlook.

VR will see the four letter coding enhancing all bogie freight vehicles and the complete demise of four wheeler wagons. Underground electrification and the presence of NSW??? (New Name) locomotives on through-running between Sydney and Melbourne, and the possibility of Sydney to Melbourne electrification (if the promise is not broken).

NSW will see the demise of four wheelers, four letter freight wagon coding and red livery, high speed intercity expresses, high powered diesels (with the tender for 2500/3000 HP locos closing in June 1980) and more electrics for the Newcastle and Goulburn electrification projects. Expected is the possibility of the Sydney to Melbourne electrification, through running from Sydney to Melbourne (indicating that we will see the ANR 'GM' series locomotive in NSW and hopefully a VR loco or two), plus through running from Port Pirie to Lithgow, indicating ANR (ex SAR) 700 class diesels into the state and of course the gradual demise of branch lines that the system appears 'hell-bent' on closing.

Queensland will see more suburban electrification and the gradual demise of the inefficient four wheelers, as well as more huge block coal trains.

South Australia will see more of the NSW '80' class (and no doubt the new class of 2500/3000 HP units), the eventual demise of four wheelers and the removal of any evidence that there was an SAR. The SASTA will introduce the new look rail car sets, that are futuristic in appearance and no doubt operation. The new link to Alice Springs will see the eventual cessation of the narrow gauge system that is a modeller's dream. Through running between Melbourne and Adelaide will see more of the VR 'C' class in the state and the gradual shut down of many inefficient branch lines. Of course the anticipated standardisation of the Crystal Brooke-Adelaide link would drastically change the system completely, giving modellers a wide scope of motive power to draw upon.

Western Australia will see the fruition of standardisation of the rail gauge, with a gradual upgrading of all rolling stock, which would give the modeller the scope to model WestRail as well as

some of that 'stuff' from the east.

Tasmania will see the full effects of the ANR takeover, with the demise of the inefficient vehicles, motive power and lines. The four wheelers are already on the way out as are many other unused wagons (sheep & cattle). New (to Tasmania) motive power will arrive that will give Tassie modellers scope to purchase (if available) a loco off the shelf, for the SAR/ANR '830' class units are due soon for shipment from the SA narrow gauge system to the Apple Isle.

In all, the future looks good for the modeller who is interested in the modern-era, but for those who prefer the past it is time to get off your 'botts' and collect the relevant modelling details, for it is now too late to record much about the steam era, and time and the almighty bulldozer soon removes the evidence that 'anything' was in situ, no matter what the records indicate.

Now for 101

We at AMRM have spent many extra hours to make Issue 100 a little better than usual. Advertisers have dropped their support a little and this space has been taken up with articles. We trust that you enjoy our efforts as we enjoy the preparation. If you have any comments please feel free to express them in written form, of course suggesting a remedy. No. 100 has been a special objective and, despite a few reservations, we are happy with it and hope YOU, the readers, also share our happiness. We look forward to the future, with of course active participation by AMRM readers.

HANDY HINTS

Subsequent to the excellent article by Ross Hurley in the July/August, 1978 issue regarding "real" fishplates on previously naked rail, a more conventional alternative to toothpaste tube is found as Slaters' rivet sheet. This is easier to handle and also does not provide electrical continuity where it is not wanted.

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Other News From the Dockyard

Continued from page 2

STOP PRESS: The HO 3-Truck Hillcrest Lumber Co Climax and HO 3-Truck San Joaquin RR. Climax Locomotives, are both expected from "United" in February. Price: \$533.50, either model... Due about the same time from Overland Models are the HO UP 'CA-11' Steel Bay Window Caboose... A new run of our HO Fittings Price List is now available @ 95¢ per copy. Postage 45¢ extra. Totalling over 40 pages and listing the many thousands of relevant items carried in stock, this Price List is a must for all scratch builders working in OO/HO and requiring loco, car, track and wayside hardware.

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No. 39 — July/August, 1969
No. 40 — September/October, 1969
No. 41 — November/December, 1969
No. 44 — May/June, 1970
No. 54 — January/February, 1972

All the above are available at the price of 45¢ each, including post and packaging.

No. 74 — September/October, 1975

The above issue is available at the price of 55¢ each, including post and packaging.

No. 78 — May/June, 1976

No. 80 — September/October, 1976

Issues 78 and 80 are available at the price of 65¢ each, including post and packaging.

No. 82 — January/February, 1977

No. 83 — March/April, 1977

No. 84 — May/June, 1977

No. 85 — July/August, 1977

No. 86 — September/October, 1977

No. 87 — November/December, 1977

Issues 82 to 87 are available at the price of 85¢ a copy, including post and packaging.

No. 88 — January/February, 1978

No. 89 — March/April, 1978

No. 91 — July/August, 1978

No. 92 — September/October, 1978

No. 93 — November/December, 1978

No. 94 — January/February, 1979

No. 95 — March/April, 1979

No. 96 — May/June, 1979

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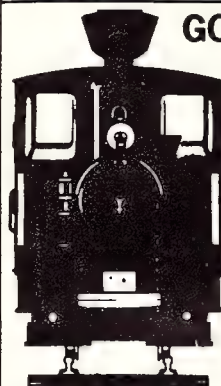
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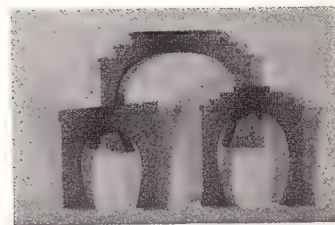
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Further Information Leaflets are in course of preparation covering "Nature's Own Realm" giving hints and tips on modelling Grasslands, Forest and Field, Rivers and Creeks, Lakes and Ponds etc. etc.

Tunnel Portals

Tunnel portals vary from the simply practical to the highly ornate, depending largely on the whim of the builder. Whether the portal will have wing walls or not depends on the nature of the ground in which the tunnel is built. Where the ground is solid rock no wing walls are needed. In soft ground wing walls must be used to prevent the ground from collapsing and blocking off the tunnel entrance.

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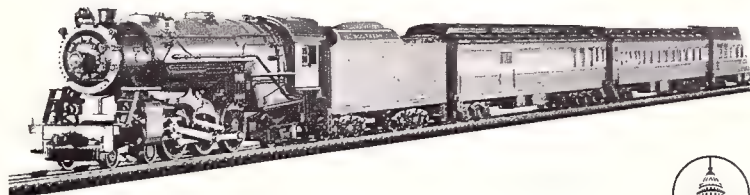
7025 Single Tunnel Mouth, sloped top (2) \$2.25
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Prices were current at the date on which this advertisement was prepared but may be subject to change without notice.

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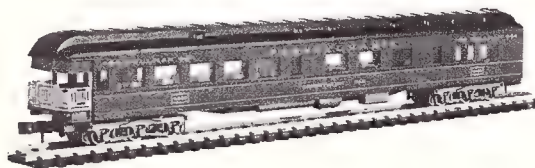
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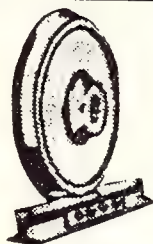
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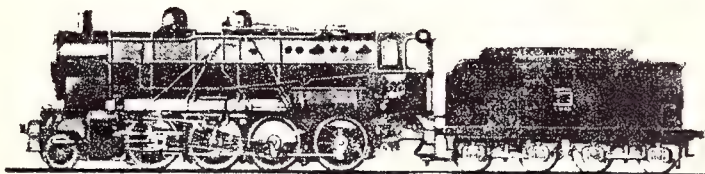
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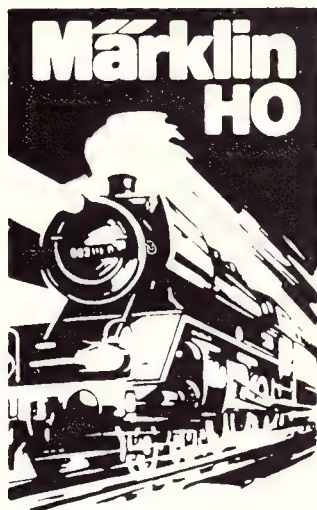
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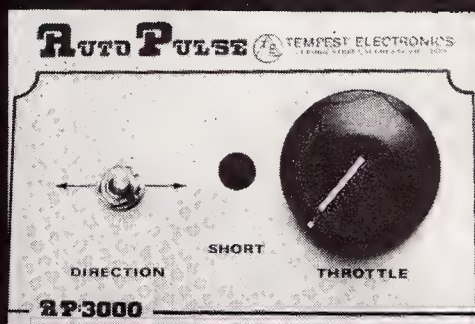
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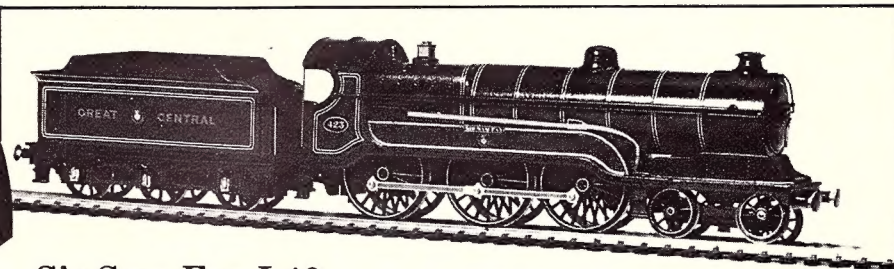
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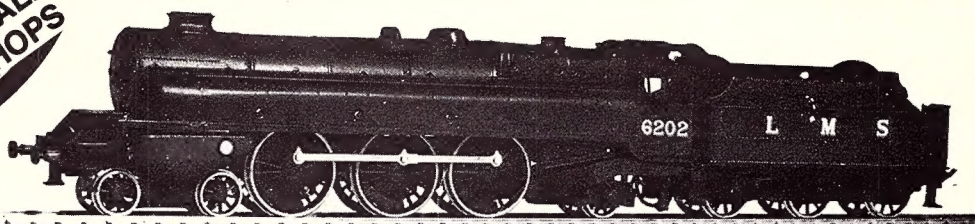


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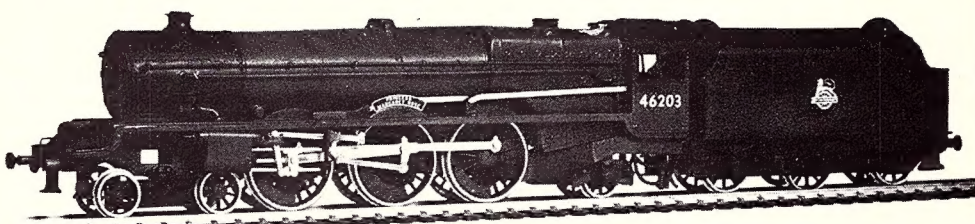
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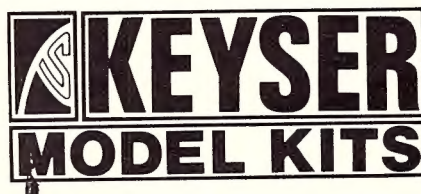


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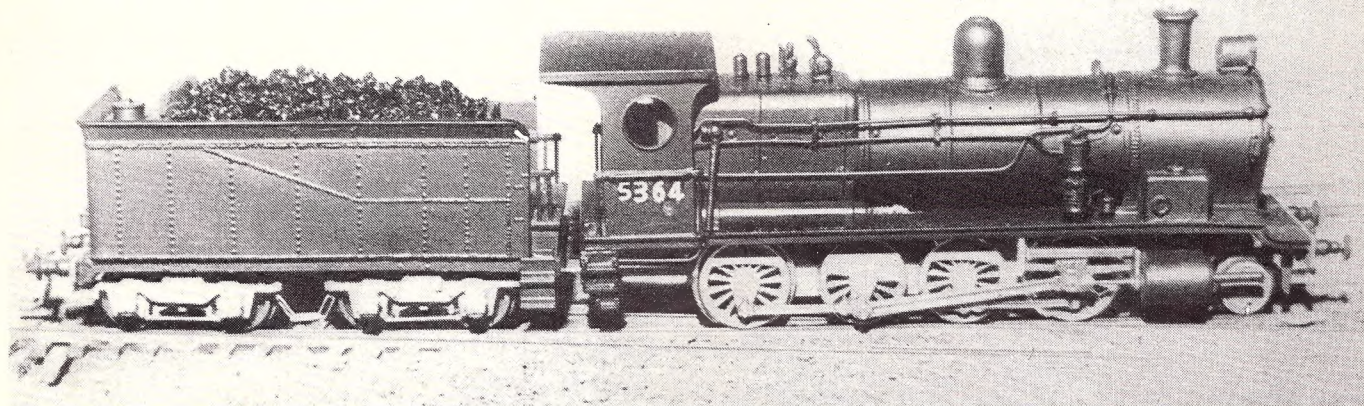
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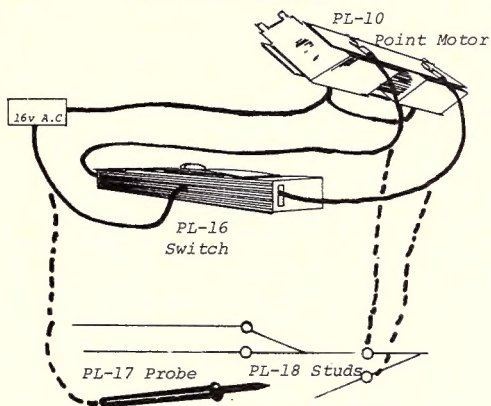
PECO

POINT MOTORS

No longer the need for ugly boxes fitted to the sides of points. Peco point motors just fit to the base of the point itself, converting it immediately from hand to electrical operation. With no linkage or other connections it provides positive action and being fitted under the point, is completely invisible and out of the way of other tracks. Simplicity in itself, just a hole in the baseboard. Fitted with terminal devices for attaching the electric control wires.

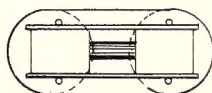
Should above baseboard operation be essential the point motor can be mounted alongside the point using the new adaptor base, PL-12. The adaptor base, PL-12, has an over centre spring lock which enables the Peco point motor to be used with brands of point other than Peco and for the control of other devices in and around the model railway layout.

WIRING THE POINT MOTOR

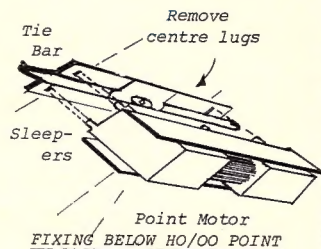
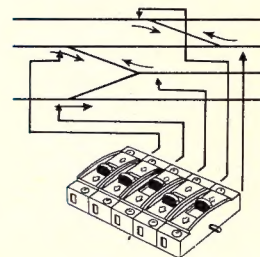


ALTERNATIVE METHOD OF CONTROL

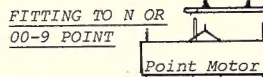
PL-10 PECO POINT MOTOR ..	\$3.50
PL-12 ADAPTOR BASE	\$1.50
PL-16 POINT SWITCH	\$2.35
PL-17 PROBE	\$1.95
PL-18 STUDS	\$1.95



For mounting below point drill two 25mm (1") holes in baseboard, join with keyhole saw.



FITTING ABOVE BASEBOARD



TO ALL RETAILERS: The prices referred to in this advertisement are recommended prices only and there is no obligation to comply with the recommendation.

up hill and down dale



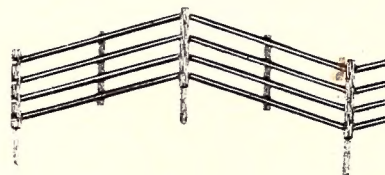
The model fencing system that follows the landscape contours in a true prototypical manner - each post remains vertical regardless of the terrain.

No fencing system would be complete without gates. The Peco range includes Field Gates, Stiles and Wicket Gates. The Field Gates even have the hinge plates, bolt heads and spring catches modelled on them.

For HO/00 LK-45 (approx. 1050mm) Fencing	\$1.95
HO/00 LK-46 Field Gates (2), Stiles (2) and Wicket Gate ..	\$2.50
For N NB-45 (approx. 1000mm) Fencing	\$1.75
N NB-46 Field Gates (2), Stiles (2) & Wicket Gate ..	\$1.95

PECO LINESIDE

Flexible Field Fencing



As a consequence of the removal of the British Preferential Tariff there is a cost increase of around 20%. This combined with increasing oil prices means that there will be further price alterations again soon. Present prices are interim and are based on averages of old and new higher costs.

★★★★★ from good hobby shops everywhere